A Lecture
ON
THE APPEARANCE OF PARALYSIS ON THE SIDE OF A LESION IN THE BRAIN.

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(*Continued from* p. 4.)

AMONG the cases I could mention, having the same meaning as the four I have already related, there are three which I ought to give in addition to those four.

Dr. W. Swayne Little,* according to Gintrac,† has reported the case of a patient whose *left* side became paralysed after having had the *left* anterior lobe of his brain pierced by an iron spit.

Abercrombie‡ gives a case of Hill,§ in which, after two months, during which there had been vomiting, headache, and numbness in the *left* hand, the whole *left* side became paralytic. After another month a small tumour appeared by the side of the bregma, which discharged matter, with some relief. Seven months later Mr. Hill found an opening in the *left* parietal bone, and, having applied the trephine there, he discovered an abscess, which discharged four ounces of matter. There was much relief after that discharge, but protrusion of the brain took place, and the patient died. The brain was found destroyed by suppuration two inches around the opening of the skull. In this case it is clear that the paralysis depended on the abscess, as it increased with it, and it diminished twice after the issue of matter.

J. Lafargue‖ gives a case of fracture of the *left* parietal bone, followed by *left* hemiplegia. Near the fracture the cerebral substance was found reduced to a brown-greyish pulp (*detritus*); this colour, becoming bluish, extended to the centrum ovale. The right hemisphere was perfectly normal. There can be very little if any doubt that in this case the cause of the paralysis of the left side of the body was in the left half of the brain.

2nd. The second reason I will give to prove that a paralysis may be caused by a lesion in the same side of the brain is drawn from cases in which there were symptoms of hæmorrhage in the brain at the time that a paralysis appeared, and in which no hæmorrhage in that organ was found after death except on the side of the paralysis.

Diday,¶ a very accurate observer, relates that a woman lost consciousness suddenly and completely, and when she recovered her senses her right limbs were paralysed. For five years she remained incompletely paralysed (of the *right* limbs and *right* side of the face). She died of heart disease, and the autopsy showed no disease in any part of the brain, except in the *right* side. An old cyst replaced the right corpus striatum, and the neighbouring white radiations. In the *right* posterior lobe there was a very small yellow cicatrix.

Dégranges,** quoted by Gintrac,†† gives the case of a girl who was attacked with vomiting, coma, paralysis of the *right* limbs and convulsions, then spasmodic contraction of the same limbs. In the centre of the *right* posterior lobe, a small clot was found surrounded by a yellow, soft pulp, with red punctuations.

Mr. G. W. Callender‡‡ gives a case of sudden paralysis of the *right* side, followed by death in nine hours. A recent clot, the size of a walnut, was found in the *right* hemisphere. Thence the blood, passing through the corpus striatum, had entered the various ventricles.

A very interesting case, with considerable details, is given by Hillairet,* a distinguished physician of Paris. The patient had several attacks of hæmorrhage of the brain, all in the right half; the *right* posterior lobe was almost destroyed, and the *right* optic thalamus was notably atrophied. The paralysis was on the *right* side.

In a well-recorded case, Gintrac† states that a patient became paralysed of the whole *left* side, face included, after an attack of apoplexy. There was closure of the *left* eye, and diminution of feeling in the *left* arm. Between the corpus striatum and the optic thalamus on the *left* side, and the cerebral substance on the external part of the organs, there was a cavity three inches in length, one inch in height, and as much in width, containing a clot of blood.

There are on record a number of other cases of apoplexy with hemiplegia on the side of the cerebral hæmorrhage. I will only name the authors who have published such cases:—Morgagni,‡ Brunner,§ Lerminier,‖ Dr. R. Boyd,¶ Rostan,** Albi.††

It is clear that when we find hemiplegia appearing together with apoplectic symptoms, we must admit that the only lesion found, and consisting in evidences of fresh or old laceration of brain-tissue by effused blood, is the cause of the paralysis; and if, as in the above cases, the loss of motor power appears on the side of the brain lesion, it is evident that in those cases the explanation that that kind of hemiplegia depends on an *unseen* lesion in the opposite side of the brain must be rejected.

3rd. In a number of cases of paralysis on the side of the only lesion found in the brain there was aphasia coexisting with left hemiplegia, the left side of the brain being the seat of the only organic alteration found after death. Such is what was found in the following cases. One of Professor J. Syme,‡‡ in which there was fracture of the cranium, with very considerable serous effusion pressing over the *left* middle lobe, which was much altered; this lesion producing aphasia and paralysis of the *left* side. Another of Cruveilhier,§§ in which a great part of the *left* anterior lobe was hardened and red, paralysis of the *left* side and loss of speech being the symptoms. A third of Bayle,‖‖ in which there was disease of the meninges and the convolutions and white substance of the anterior lobe on the *left* side, with aphasia and paralysis of the *left* limbs.

Unless we admit either that the aphasia alone depended on the lesion found in the left side of the brain and the paralysis on a supposed but unseen lesion of the right side of the brain, or that both the aphasia and the paralysis did not depend on the only organic alteration found in the left half of the brain, but on another lesion not found, but supposed to exist in the right half—two equally improbable explanations,—we must accept as correct that paralysis in those cases was caused by a lesion in the corresponding side of the brain.

4th. The extent of the lesion is also a strong argument in favour of the view that in some cases of paralysis on the side of the organic alteration in the brain the cause of this loss of movement was that alteration itself, and not a supposed but unseen one in the other half of the brain. Among cases of that kind I will briefly mention some, two of which—those of Dr. Henry Day, of Stafford, and Dr. Dechambre, of Paris—deserve special attention, on account of the great care with which the autopsy was conducted.

P. P. Broc¶¶ relates that in the case of a woman who had lost the power of motion and feeling in the *left* limbs, remaining intelligent, the *left* hemisphere was reduced to a pulp (*bouillie*).

* Dublin Quart. Journ. of the Med. Sciences, Aug. 1851, pp. 226.
† Cours de Théorique et Clin. de Pathol. Interne. Paris, 1868, vol. vi., p. 826.
‡ Pathol. and Practical Researches on Diseases of the Brain. 4th edit., Edinb. 1845, p. 190.
§ Cases in Surgery, p. 130.
‖ Gaz. de Méd. de Paris, 1836, p. 616.
¶ Bulletins de la Soc. Anat. de Paris, 1836, xi., p. 77.
** Journ. de Méd. de Bordeaux, 1841, p. 164.
†† Loc. cit., vol. vii., p. 104.
‡‡ St. Barth. Hosp. Reports, iii., 1867, p. 435.

* Mémoires de la Soc. de Biologie, 1858, p. 129.
† Loc. cit., vol. vii., p. 226.
‡ Rech. Anat. sur le Siège et les Causes des Maladies, Paris, 1820, vol. i., p. 145.
§ Quoted in Traité des Maladies du Cerveau, par A. L. J. Bayle, Paris, 1826, p. 319.
‖ Annuaire Médico-Chirurgical, Paris, 1819, p. 223.
¶ Medical and Chirurgical Transactions, London, 1856, vol. xxxix., p. 62.
** Rech. sur le Ramoll. du Cerveau, 2nde edit., Paris, 1823, p. 97.
†† Bull. de la Soc. Anat., 1851, p. 352.
‡‡ Edin. Med. Journal, Oct. 1833. Translated in Journal des Connaissances Médico-Chirurg., Paris, 1833, vol. i., p. 216.
§§ Dictionnaire de Médecine et de Chirurgie Prat., Paris, vol. iii., 1829, p. 309.
‖‖ Loc. cit., p. 312.
¶¶ Appréciation des Progrès de la Physiol. Thèse de Concours. Strasbourg, 1837, p. 44.

Freschi* states that a woman who had once had a temporary paralysis of the *right* arm one day screamed out that her *right* arm and leg were dying away, after which she lost consciousness, and soon died. The left hemisphere was found perfectly healthy; the *right* was transformed into an enormous cavity containing a blackish clot and fluid blood.

Mr. G. W. Callender† gives this case:—A male, after having been attacked with epilepsy, and then cured for five years, had a return of the fits, with *left*-sided paralysis. From front to back the entire *left* hemisphere above the level of the corpus callosum was one large abscess. A mere shell of soft brain-tissue separated it from the ventricle and from the surface.

Ch. Curtius‡ speaks of a case of apoplexy, with paralysis of the *right* side, in which the whole *right* hemisphere was converted into a mucous substance, which came out like a thread when a knife was lifted up out of it.

Rostan,§ in a woman who had been suddenly attacked with a complete hemiplegia of the whole *left* side, found almost the whole *left* hemisphere in a state of pultaceous softening.

In an individual who had suddenly been attacked with complete paralysis of the limbs and face on the *left* side, Dr. Henry Day‖ found that the *left* middle lobe from top to bottom, and including the corpus striatum, was completely softened and broken down almost into a pulp.

Dechambre,¶ in a good paper on the subject of paralysis on the side of the lesion in the brain, gives all the details of a case in which a sudden paralysis, which soon became complete, with drooping of the upper eyelid, occurred in the *right* side. The autopsy showed no lesion in the left side of the brain, but there was considerable alteration of the *right* hemisphere. Many parts of the middle lobe were reduced to a reddish pulp, the corpus striatum was destroyed, and the softening occupied the centrum ovale and also parts below the lateral ventricle.

In the presence of such facts it seems to me almost impossible to maintain that the great lesion found at the autopsy of those seven patients had not produced paralysis, and that the hemiplegia existing depended on an alteration not detected in the side of the brain which was declared healthy by the able men who made the autopsy.

5th. The location of a lesion in the brain may give also a strong argument in favour of the view that a paralysis can be produced by a lesion in the corresponding side of the brain. If we find, for instance, that simultaneously with a paralysis in one half of the body, symptoms appear which point to a certain part of the base of the brain as the seat of the disease, and if the autopsy confirms this diagnosis, it is almost certain that the paralysis was caused by the lesion found. I was able in two cases to diagnose the seat of the disease in cases of paralysis on the side of the lesion, and the autopsy showed that I was right.

In a very large number of cases paralysis has appeared on the side of the encephalic lesion, when it existed in or on the pons Varolii, the cerebellum, the crus cerebelli, the medulla oblongata, or other parts of the base of the brain. Indeed, *in cases of disease of the petrous bone or of the surface of the encephalon near that bone, paralysis, if it occurs at all, will appear as frequently on the side of the lesion as on the opposite side.* I will by and by discuss the question whether there are there nerve-fibres that have not yet made their decussation. All I wish now to impress on your mind is that those parts of the cerebro-spinal centres are very peculiar. They are so not only because they often give rise to paralysis on the side of the lesion, but also because they can be more injured than any part of the spinal cord—of which most of them are chiefly a continuation—without giving rise to symptoms, and because when injured in one of their halves there is either no paralysis or a paralysis on the opposite or on the same side, and in this variety also they greatly differ from the spinal cord.

Among the cases of paralysis on the side of the lesion, with disease of the base of the brain, there is one which must be singled out, as it shows more than any other that with the destruction of all (or very nearly all) the motor conductors of one side—those that some suppose not to have yet made their decussation, as well as those the crossing of which with similar ones of the other side is already made—paralysis can appear in the limbs and face only on one side, and that side the one in which the lesion exists. This case was long ago published by Mr. Stanley.* The *left* side of the face of the patient was attacked with paralysis of motion and sensation; the *left* limbs were paralysed of motion. The autopsy showed that a tumour occupied the whole of the *left* side of the pons Varolii, extending into the *left* crus cerebelli.

If we now survey the whole field of the cases I have briefly mentioned or alluded to, it is clear that the following conclusion comes out forcibly from these facts—that there cannot be a doubt that there are cases in which hemiplegia has been caused by a lesion in the corresponding half of the brain. But is there no explanation of these cases in harmony with the universally admitted theory that one-half of the brain is the centre, or contains the centres, for the voluntary movements of the limbs on the opposite side? This is the question I will now examine.

(To be concluded.)

* Gazette Méd. de Paris, 1844, p. 58.
† Loc. cit., vol. iii., 1867, p. 449, case xlviii.
‡ Quoted by Morgagni, loc. cit., 1821, vol. ii., p. 45, and 1824, vol. ix., p. 282.
§ Loc. cit., p. 67.
‖ THE LANCET, London, 1875, vol. i., p. 119.
¶ Bulletin Clinique, Paris, 1836, vol. i., p. 113.

A Clinical Lecture
ON
A CASE OF ANEURISM OF THE COMMON FEMORAL ARTERY.

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GENTLEMEN,—It is often more interesting to see the end of a case than the beginning, and certainly it is profitable for you to mark the results as well as the proceedings of surgery. Hence I have brought before you to-day, for re-examination, a man on whom most if not all of you saw me operate last summer, and whose case you then watched for several weeks with lively interest. I hope you will now find it of advantage to look back on the case, and consider with me the lessons which it teaches and the features in its progress, which none of us found very easy of explanation at the time of their occurrence. Moreover, the treatment of aneurism is one of those old subjects which must ever be coming up for new study. Indeed, more than usual attention has been recently given to it, and some novel suggestions have been made which are worthy of careful consideration. In the comparatively limited field of the surgical treatment of such cases, it must be confessed that the ligature is at present on its trial, and many are already disposed to cast it aside for pressure in some of its forms. Different kinds of ligatures, too, have been at various times employed with a view to diminish the acknowledged dangers of the operation, and these have a peculiar interest in our day as part of the so-called antiseptic system of surgery.

The patient, Thos. M'C——, aged thirty, a shoemaker by trade, was admitted into the Royal Infirmary under my care on the 1st May, 1875. He had a very large aneurism of the common femoral artery on the left side. It is stated in the ward journal that the patient observed this tumour "about four months ago," and that it was then "the size of a marble." He says it increased slowly till within a month of his admission, when it grew very rapidly larger and more painful. Patient had been advised to rub it with iodine ointment, and, perhaps owing to his having done so rather vigorously, the tumour, when we saw it, was not only very prominent, but had a considerable elevation from its surface, over which the skin was red and glossy, like the

* London Medical Gazette, 1828, vol. i., p. 531.

pointing of an abscess. The measurements of the tumour were four inches and a half long and five inches broad, but I never thought that these gave an adequate idea of the size of the sac, for it could be felt deep in the thigh and also passing up beneath Poupart's ligament, where its exact limits could not well be ascertained. You will remember that it exhibited all the phenomena usual to aneurisms, but as we carefully noted these at the time, I need not now dwell on them, except to remark that all the signs referred to were present in a very exaggerated form, owing to the size of the aneurism and the thinness of the skin covering it. I wish, however, to remind you of a fact which I think of importance, as leading to the explanation of the future progress of the case—viz., that we could from the first differentiate two distinct parts of the aneurismal tumour, one which was deep, broad, somewhat flat in shape, and not easily measured, the other which was more superficial, protruding from about the centre of the deep part, and from which arose the lesser prominence mentioned previously, with red skin and apparently on the point of bursting. Besides, in this more superficial portion the blood could be felt quite fluid, while in the deeper part it seemed to be more solid, as if the blood there was in that loose friable state of coagulation described by Broca as common in large sacs.

As time was of great importance in the treatment of such a case, I at once determined, with the consent of a consultation, to tie the external iliac at its upper part. I think it was obvious to everyone who saw the case that no other practice would have been safe in the circumstances. It was not a favourable case for pressure; its size and position forbade opening the sac, and the condition of its coverings alone would have prevented me from trying any kind of puncture, whether simple or electrolytic. On the 5th of May, then, I tied the external iliac above its middle as required by the upward extension of the aneurism. I need not detail the steps of the operation. No difficulty was experienced, but I may mention that I in this case employed a silk ligature which had been drawn through melted wax and carbolic acid. My reason for doing so, instead of employing prepared catgut, will be explained by and by. I cut the ends of the ligature short in the wound, and brought it together with stitches of silver wire, leaving some loose at the upper end, which was most dependent as the patient lay in bed. I likewise introduced at this end a drainage-tube to some depth, in order to ensure the free escape of the early discharge which always occurs from such a wound. I need hardly say to you that all these proceedings were done under the carbolic spray, except the cutting part of the operation. Gauze dressings were then applied as usual. Immediately on tightening the ligature the pulsation in the aneurism ceased, and it is noteworthy that it never recurred during the progress of the case. The tumour rapidly diminished in size, and we were all pleased to notice how the appearance of pointing subsided, and the skin became very soon as pale and natural as that of the surrounding parts. The temperature of the limb was easily maintained, and the general health and spirits of the patient improved daily.

The drainage-tube was withdrawn on the 7th of May—i. e., on the second day after the operation, as there was then no discharge at all from the wound. On the 18th inst., it is noted in the ward journal that a little semi-purulent fluid was found on the dressings "for the first time since the operation." This discharge was very trifling in amount, and ceased altogether in a few days; but it was carefully examined every day, and nothing like the ligature was ever found in it.

The tumour at this time followed rather an unusual course, for though greatly diminished, it still remained of considerable size—I should say it was about as large as a lemon. Its deep part had already consolidated thoroughly, but the more superficial portion continued fluid and prominent for some time longer; or, rather, after partially solidifying, it seemed to become more fluid than ever. The skin over it was pale and healthy, and there was not the slightest thrill of pulsation to be felt in any part of it. You remember I found this state of matters rather puzzling at first, but on reflection I came to the conclusion that this prominent part of the tumour had become changed into a blood-cyst, such as often occurs during the absorption of clots elsewhere, notably in the female mamma, the ovary, and the brain.

My idea was that before I ligatured the artery the aneurismal sac had burst into the areolar tissue, where it formed a secondary sac on the top of the primary one. It was over this that the skin was red, and like that of a pointing abscess. After my operation the blood coagulated as usual in the primary sac, as I shall call it, filling it up, and becoming in due time organised into fibrous tissue; while in the secondary sac we had rather the course of an extravasation followed than that of an aneurism. In it the outside layer of blood alone became organised so as to form a fibrinous sac enclosing stagnant fluid blood, which, I doubt not, became changed in the usual way; the corpuscles disintegrating and yielding up their hæmatin, to be dissolved in the serum. In short, we very soon had a cyst containing red serum between the skin and the real aneurism.

I believe—as indeed I told you at the time—I might have safely drawn off this fluid by the aspirator; but I preferred the safer practice of applying pressure, which I did by means of a bag of sand laid upon the tumour. I am not certain of the exact date when this treatment was commenced, for unfortunately it has not been noted in the journal; but on the 2nd of June it is recorded that compression had been employed "for the last few days," and that already the tumour had diminished in size. This diminution was so rapid that by the 12th of June the prominence was compared in size to a walnut, and in a month from the commencement of the treatment its relic was only to be detected by careful examination.

The deep tumour had by this time likewise diminished very much, and was quite firm to the feeling. In fact, the man might have been dismissed cured by the middle of July, but was kept in the hospital for the sake of observation. You may remember that even before that date he had made himself very useful in the ward, and was an excellent assistant at some of our operations.

I ought to have mentioned before this that late in the history of the case it was found that a small aperture existed in the upper part of the cicatrix of the operation wound, and led to a sinus about two inches long. It was so narrow as only to admit a small probe; but it was very troublesome to heal; and, after trying milder measures, I was at last obliged to lay it open; it then healed quickly enough. I cannot be certain as to the cause of this sinus, but I am sure it was not in any way due to the silk ligature, for it was quite superficial, and the ligature had long been covered by the tissues before it was detected.

I now ask you to consider what has become of the ligature? It could not have been discharged without our seeing it, for we examined every dressing with great care, and I therefore believe that it is still retained. I do not know of any observations that would lead us to suppose that silk may be liquefied as we know catgut is, and therefore the ligature in the present case could neither have come away in a fluid form nor been absorbed. Far less could it have become transformed into fibrous tissue; but I think it accords with the present state of our knowledge to believe that its filaments have been separated and surrounded by the fibrous elements which have been formed out of the exudation-matter present in the wound; and that thus, so far changed and enveloped in the tissues, it may remain for an indefinite period without coming to the surface or causing irritation. From following my practice, you know how much the antiseptic dressings assisted in bringing about this result; for they prevented the destruction of the exudation, and preserved it all, or nearly all, for organisation. But had they not been thus successful, and had free suppuration been permitted in the wound, then I am sure the ligature would have been discharged as in olden times. If such had happened in our case, it would have been clear that the ligature had ulcerated through the artery; but as things really stand, this is not at all clear. Nay, I think the ligature has not cut the artery, but still encircles it; for the behaviour of such a ligature as ours, when treated antiseptically, must be very different from that of an ordinary ligature treated without antisepticism. In the latter case it must cut, and is made to cut the artery, but in the former it is shortened and left among the tissues, and kept free from all causes of irritation. It only compresses the arterial tube. It does not drag upon it, and therefore whenever the coats of the artery have accommodated themselves to the compression, which their elasticity enables them soon to do, they no longer feel it. They do not necessarily die under it; for if they did the ligature would come away,

which it did not do in our case. So far therefore as it goes, this case proves that an antiseptic silk ligature may effectually compress an artery without killing or cutting its tunics.

You may now ask, What, then, are the advantages of the silk over the catgut ligature? I answer that, in my opinion, these are two in number—viz., first, the silk ligature, by its more decided pressure, is more likely than the catgut to rupture the internal, and perhaps part of the middle, coat of the artery, thus making the closure of the vessel more secure. I have found on dissection that the catgut ligature has no such effect on the coats of an artery. Secondly, and perhaps more importantly, the silk ligature holds the artery for a longer time than the catgut. We know that the latter becomes softened in a few hours, so as to lose its compressing power, and it is very soon thoroughly liquefied.

These points are both well illustrated by the preparation which I now show you from our excellent pathological museum. It is that of the iliaco-femoral artery taken from a case which occurred to me some years ago, and an account of which was published by me in the *Glasgow Medical Journal* for May, 1870. This artery was ligatured by myself in two places at two different times with prepared catgut, and you will perceive that at these places the calibre of the vessel is quite undiminished, and its lining membrane quite smooth, and only slightly reddened. I may add that it was found at the inspection quite empty. Now all these circumstances indicate that the ligature had not ruptured any of the arterial coats, and that it had held the vessel for too short a time to permit a clot to adhere to its lining membrane. Failure was a necessary consequence, and it was to avoid such an occurrence again that I employed a prepared silk ligature in the case now under consideration. I am glad that the practice has been so successful.

I must now add a postscript to the history of the case already given, and, like many postscripts, it may be thought by no means the least interesting or curious portion of the narrative.

When I left Glasgow in the beginning of August last for my holiday trip I considered M'C——'s case as concluded, and concluded satisfactorily; but, much to my surprise, on my return to the hospital upon the 3rd of September, I was told that the aneurism had returned. Of course I very soon carefully examined the patient, and found the following state of parts.

In the left groin, about an inch and a half below Poupart's ligament, and rather to the inside of the hard relic of the former aneurism, there was a small pulsating tumour, nearly globular in form, and about an inch in diameter. It had lateral as well as vertical pulsation, synchronous with the radial pulse, and a faint bruit. It could be very easily emptied by direct pressure on the tumour, and on removing the finger it at once refilled. Lastly, this pulsating tumour had only been observed for about a fortnight before my return to Glasgow.

I could not but agree with the opinion that this was again an aneurism, but it was difficult to decide whether it was part of the old sac opened out again or altogether a new sac, and, in any case, what artery was involved. For, on careful examination, I could feel no pulsation in the left iliac or common femoral arteries, while on the right side both were easily felt. Hence I concluded that the vessel on the left side had been thoroughly obliterated by my operation from the site of the ligature to that of the aneurismal tumour. If so, this new aneurism could not be filled by the direct current of the blood. Could this, then, happen through the re-establishment of the collateral circulation? I think we must suppose so, and this opinion is corroborated by the fact that no pressure which I could make on any part around the tumour at all affected its pulsation. To do this, direct pressure over the tumour had to be employed. No other means would answer, and fortunately that was well borne by our patient. The arterial compressor was kept applied, with suitable intervals of relaxation, for six days; when it was found that the tumour was flattened, the sides of the sac had apparently adhered to one another, and not the slightest pulsation was to be felt.

Now I think this rapid cure indicates that the sac was a recent formation, else it would not so readily have become adherent, and also that the blood current was not so forcible as a direct current through the main artery. If part of the cyst formerly described in connexion with the old aneurism could be supposed to have become opened up once more with blood from one of the collateral arteries, it would, I think, best account for the phenomena of the case, but the explanation supposes an occurrence so unprecedented that I cannot do more than merely suggest it as a possibility.

On the 17th of September the patient went home quite cured, and has since continued his ordinary work, as a shoemaker, with perfect ease and freedom from all his former symptoms. A hard tumour, the size of a field bean, may yet be felt in the site of the former aneurism. Such is the state of matters at the present date (December 3, 1875), as you are aware from personal examination of the patient.

ON GELSEMINUM SEMPERVIRENS.

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(*Continued from vol. ii. 1875, p. 909.*)

In our previous communication we described a semi-tetanic condition, produced by gelseminum, supervening after more or less marked loss of voluntary and reflex power. Whilst testing the effect of large doses of this drug on the heart, we produced well-marked tetanus, which led us to further investigate this condition. We have experimented on thirty-four frogs. We injected the solution under the skin of the back in the neighbourhood of the posterior lymph heart. A third of a grain and upwards of the alkaloid prepared for us by Mr. Gerrard caused well-marked tetanus. These large doses quickly caused great loss of voluntary and reflex power, with arrest of respiration. When the paralysis became well developed, but generally before the abolition of reflex action, mechanical and electric stimulation induced slight tetanic twitches. These rapidly increasing in severity, the posterior extremities being most affected, and on irritation of any part of the body they became rigidly extended, the toes widely separated and spread out like a fan. The anterior limbs and the muscles of the trunk were generally less affected, though in one case during the paroxysm the body was bent and the lower jaw strongly drawn down. In a few seconds the paroxysm temporarily ceased, the animal becoming limp, and the tetanus could not for some seconds be re-excited, as if the cord were exhausted and required a short pause to regain its energy. The severity of the tetanic convulsions varied and was not always in proportion to the dose, even when the same preparation was used. They were never so severe as the paroxysms produced by strychnia. When the tetanus was well marked, merely striking the table or stamping strongly on the floor would excite the paroxysm. After the rigidity had subsided, the legs generally remained extended, though flaccid, but in some instances they were strongly drawn up on the trunk. The convulsive movements generally began about three-quarters of an hour after a dose, but on one occasion they set in in seventeen minutes, and on two other occasions, after a dose only just adequate to produce a slight attack, the tetanus was delayed eight hours. The tetanic state lasted a very variable time, usually from two to three hours.

Strychnia tetanus differs strikingly from gelseminum tetanus in the following particulars:—1. Strychnia tetanus supervenes without previous loss of voluntary or reflex power. 2. Respiration continues unimpaired during the paroxysms. 3. Every part of the body is affected, the anterior extremities as strongly as the posterior. 4. The cord is much less rapidly exhausted; thus a fresh paroxysm could be excited directly the previous one had declined, and in this way it could be reproduced many times without any interval or apparent diminution of intensity. 5. Strychnia tetanus persists for many hours, or even for several days.

Gelseminum tetanus, on the other hand—1. Is always preceded by considerable loss of voluntary and reflex power.

2. Respiration ceases before the onset of the convulsions. 3. The posterior extremities are most affected. 4. Irritation fails to excite another paroxysm till the lapse of some seconds, as if the exhausted cord required time to renew its energy. 5. It lasts only a short time—sometimes only half an hour, rarely more than three hours.

We have to ascertain whether these tetanic convulsions are due to the action of the gelseminum on the brain, cord, motor nerves, or muscles. The character of the tetanic convulsions tends to show that they are due to the action of the drug on the cord. They are not due to an effect on the brain, for they took place in frogs after pithing and destruction of the brain. Nor are they due to an effect on the nerves or muscles, for they occurred in the posterior extremities after tying the abdominal aorta; they must, therefore, depend on the action of the gelseminum on the spinal cord.

We wish to draw particular attention to the curious fact already mentioned, that the tetanus is always preceded by considerable loss of voluntary and reflex power, a loss in some cases nearly complete. Respiration had almost, and in some cases quite, ceased before the onset of the paroxysms. Is this strange effect—namely, paralysis followed by tetanus—produced by the same substance, or does the plant contain two active principles having opposite properties? Or is part of the alkaloid chemically and thereby physiologically altered during the process of extraction? We do not think that this unusual antagonistic action is due to a chemical alteration of part of the alkaloid, for though we elicited these tetanic convulsions most markedly after the alkaloid, yet we noticed that in certain instances the liquid extract induced slight quiverings, and in others well-marked tetanoid movements, in some cases almost as marked as when we employed large doses of the alkaloid. It occurred to us that in preparing the alkaloid by means of ether an ethyl compound might be formed, and that through this substitution the properties of part of the alkaloid might be reversed; but Mr. Gerrard prepared us an alkaloid extracted by means of chloroform, and this we found produced tetanus as marked as that following the use of the alkaloid prepared by ether.

Does the plant contain a single active principle which first paralyses and then tetanises; or does it contain two agents, one capable of paralysing, the other of exciting, the cord? This question must be answered through the investigations of pharmaceutists. Our observations, however, incline us to the view that the plant contains two active principles. For it is difficult to imagine how a substance can first paralyse and then excite an organ. But if it should be held that gelseminum contains only one active constituent, then we may point out that whether we get paralysis alone or paralysis followed by tetanus depends on the dose. With small doses of the alkaloid we get only paralysis; with rather larger, quiverings and tetanoid movements; and only after large, decided tetanus—for, as a rule, tetanus occurred only after the use of one-third or one-half of a grain of the alkaloid, though on one occasion well-marked tetanus followed the use of one-seventh of a grain, and, on the other hand, on one occasion only slight convulsions followed the injection of two-thirds of a grain.

If the plant contains two active ingredients they must both be present in the liquid extract and in the alkaloid prepared for us by Mr. Gerrard, for both these preparations produce paralysis and tetanus, though we shall show their action is not identical. After the liquid extract paralysis is most marked, but after the alkaloid tetanus is more developed; as if during the preparation of the alkaloid some of the paralysing principle was left behind; and hence after the liquid extract paralysis predominates, whilst after sufficient doses of the alkaloid tetanus is well-marked. These views are supported, we think, by the following experiments. We prepared a watery solution of the alkaloid, of the same strength as the liquid extract. Mr. Gerrard extracts from the root by his method only ¼ per cent. of the alkaloid, but he thinks some of it is lost, and we therefore assumed that the root contains ½ per cent. The liquid extract is made with equal parts of the root and water, so that in effect one hundred minims of extract is equivalent to one hundred grains of root. We therefore dissolved half a grain of the alkaloid in one hundred minims of water. We then compared the effects of each solution on two series of frogs, four to each comparative experiment, using respectively five, ten, fifteen, and twenty minims of each preparation. The paralysing power of the liquid extract was found to be much greater than that of the alkaloid solution; twenty minims indeed of the alkaloid solution producing a degree of paralysis equal only to that following the injection of two or three minims of the liquid extract. These comparative experiments show that Mr. Gerrard's processes only partially extract the paralysing principle. We have thus contrasted the paralysing property of these two solutions, but the quantities were too small to enable us to contrast the tetanising effects. We had found that one-third of a grain and upwards of the alkaloid generally produced marked tetanus. We then injected three frogs, each with fifty minims of the liquid extract, and produced rapid paralysis, but no tetanus. Now a corresponding dose of the alkaloid would have produced tetanus, therefore if the plant contains only one active ingredient we should have expected the liquid extract to have excited tetanus.

To recapitulate, then, somewhat. The foregoing experiments seem to be explicable in this way:—The plant contains two active ingredients; and in Mr. Gerrard's preparation of the alkaloid the tetanising agent exists in larger proportion, whilst the paralysing agent predominates in the liquid extract. The tetanising agent produces its effects rather more tardily than the paralysing agent. Thus in employing the same quantity of each preparation, of identical strength, a small dose of the alkaloid will exert less paralysing effect than the equivalent dose of liquid extract, whilst with a large dose of the alkaloid the tetanising principle is able to overcome the depression of the cord produced by the paralysing principle; but as the action of the tetanising agent comes on later, we get first paralysis, and then tetanus. On the other hand, in using the liquid extract, where the paralysing agent is in excess of the tetanising ingredient, small doses paralyse more completely than the corresponding quantity of the alkaloid solution; whilst large doses of the liquid extract, like fifty minims, produce paralysis so profound that the tetanising ingredient fails to produce its characteristic effect. It is right to say that of the fifty minims of the liquid extract we injected under the skin a considerable quantity remained unabsorbed (as we ascertained by post-mortem examination), paralysis of the cord and heart coming on so soon that absorption was prevented. It may be said, therefore, that had larger doses been absorbed, the tetanising agent would have shown its effects. But, on the other hand, we think that these experiments tell strongly against the hypothesis that one alkaloid produces these opposite effects. Though a large quantity of the liquid extract remained unabsorbed, yet, as enough was taken up to produce rapid and profound paralysis, there was enough surely to excite tetanus.

Further, we are bound to mention that in the experiments with fifty minims of the liquid extract the fluid pushed its way under the skin, and bathed the muscles of the extremities, so as to impair their irritability. It might be suggested that this incident prevented the development of the tetanic effect on the cord; but this diminution of muscular irritability came on after the period for the onset of tetanus had passed; moreover, in two of the three observations a good deal of muscular irritability remained to the end of the experiment.

If there are two alkaloids, what is their nature? Dr. Fraser has shown that tetanising agents, like strychnia, brucia, and thebaia, by the substitution of the radicle ethyl or methyl in place of an atom of hydrogen, undergo a change in their physiological action, and produce general paralysis. Perhaps it may be said that these new substitution compounds have been produced only by chemists, and do not exist in nature. But ethyl and methyl compounds are met with in natural products, though these possess no tetanising properties. Thus in succus conii we have two compounds existing often in varying proportion—namely, conia and methyl-conia. Does the tetanising principle of gelseminum exist in part naturally as an ethyl or methyl compound, and, like strychnia, become changed by this conversion into a paralysing agent, so that gelseminum contains both a tetanising and paralysing alkaloid, the last preponderating? We may point out that, whilst strychnia, brucia, and thebaia excite tetanus by their action on the cord, their ethyl and methyl compounds paralyse by their action chiefly on the motor nerves, and in a less degree on

the cord; but we have seen that both the paralysing and tetanising principles in gelseminum affect the cord only.

We next performed a few experiments to test the antagonism between gelseminum and strychnia. As gelseminum so profoundly depresses the functions of the spinal cord, we thought that it would prevent or arrest the tetanic convulsions produced by strychnia, and our conjecture proved correct. To one of four frogs we administered $\frac{1}{170}$ of a grain of strychnia, injecting it under the skin of the back near the lymph heart, and in four minutes exalted reflex irritability set in. In fourteen minutes distinct tetanic spasms occurred, though voluntary power was not impaired, but when the animal jumped, its movements were awkward, as if the limbs had not free play, and occasionally there occurred a distinct paroxysm, the legs being rigidly extended, with the toes spread out like a fan. More generally, on irritating the animal, he became fixed in his position, and the contraction of the chest muscles forced out a muffled croak. In thirty-five minutes well-marked tetanus set in, the slightest irritation causing contraction of every muscle, the posterior legs being rigidly extended and the anterior extremities flexed across the body. The breathing was hurried and deep. To another frog we gave $\frac{1}{170}$ of a grain of strychnia, and it produced the same symptoms. When tetanus was fully developed, we injected under the skin of the back fifteen minims of the liquid extract of gelseminum, and in fifteen minutes, when well under the influence of the last drug, the spasms were much contracted, the frog became limp, and respiration had ceased—in very much the same state as if under the influence of the injection of large doses of gelseminum alkaloid. For instance, the convulsions were less readily excited, less marked, soon ceased, and some seconds elapsed after a paroxysm before another could be excited. In twenty-five minutes the tetanus had become reduced to mere quivering like that produced by gelseminum alone; in two hours and three-quarters even this quivering had ceased.

We next injected two frogs each with $\frac{1}{170}$ gr. of strychnia, and immediately after with fifteen minims of the liquid extract of gelseminum. In a few minutes slight paralysis was noticed—i. e., the animals no longer assumed their usual semi-erect posture, but squatted on their bellies. In twenty minutes distinct tetanus set in, and respiration was abolished; in thirty-five minutes the tetanic convulsions were shorter and less easily excited; in an hour and a half only quivering remained, and the animal was quite limp; and in three hours and ten minutes the quivering had ceased.

These experiments illustrate the antagonism between strychnia and gelseminum, for strychnia convulsions last two or three days, whilst gelseminum suppresses them in from twenty-five minutes to an hour and a half, if the quivering is excluded from the calculation. As the combined influence of strychnia and gelseminum produces a condition exactly like that caused by gelseminum alone—that is, a combination of paralysis and tetanus,—we think that these observations tend to further support the view that gelseminum contains two active agents; that the paralysing prevents the tetanising principle from displaying its full energy, and, in the same way, that it lessens the convulsions from strychnia.

(To be continued.)

CLINICAL ESSAYS.

BY T. PRIDGIN TEALE, M.A., F.R.C.S.,
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No. VI.—ON THE TREATMENT OF VESICAL IRRITABILITY AND INCONTINENCE OF URINE IN THE FEMALE BY DILATATION OF THE NECK OF THE BLADDER.

(Continued from vol. ii. 1875, p. 766.)

IN continuation of my paper on this subject, the following cases are brought forward to show the kind of success that has been obtained in a very obstinate disorder. For many of them I am indebted to my medical friends. The notes of some of my own cases are, I regret to say, very imperfect, but they express the main facts. The instances which I shall first relate will be those in which the operation has been clearly successful, being anxious, first of all, to prove what the operation is capable of doing. At a future time I hope to publish some of the less successful cases, as a caution to those who may adopt the operation not to be too sanguine of success in every case.

It is extremely interesting to me to find that Mr. Christopher Heath* has been working at the same subject, and has arrived at very much the same conclusions as to the operation that I have myself.

CASE 1. *Dilatation of urethra as a means of exploration of an irritable bladder; relief of symptoms.*—This case occurred prior to our removal to our new hospital—i. e., before the summer of 1869,—I believe in 1867 or 1868. A patient suffered from vesical irritability and passed bloody mucus in the urine. Failing to detect a stone, I dilated the urethra that I might search for a polypus, villous growth, or ulcer. The finger detected nothing of the kind, but the operation relieved her symptoms, so that she was able in a short time to leave the hospital. As no record was taken of the case, I am unable to find her address and inquire into her further history.

CASE 2. *Vesical irritability of three years' duration; cured by dilatation.*—Mrs. P——, of Morley, had suffered from pain in the bladder and too great frequency in micturition for three years. For the last year vesical pain had been extremely distressing, micturition occurring every hour, often many times in the hour.

Feb. 10th, 1871.—Dilatation of the urethra and neck of the bladder.

During the following twenty-four hours she suffered from very severe pain, probably from laceration of the urethra during the operation.

Feb. 13th.—Passed urine twice only during the night.

March 8th.—Is better than she has been for two years. Has very little pain. Retains her urine for two hours.

April 27th.—Hardly any pain. Is disturbed only twice each night, instead of six or seven times.

Feb. 4th, 1873.—She reports: "I think I am quite well." Sometimes she has a little pain at her menstrual periods, and often passes a whole night without having to relieve the bladder. This patient attributed her ailment to prolonged sitting at her work as a bonnet-maker. There was no disease of uterus. The urine was healthy, and the finger failed to detect any disease in the bladder.

CASE 3. *Excessive frequency in micturition cured (?) by dilatation.*—This case is open to question because at the time when I dilated the urethra I also stretched the sphincter ani. Further I have not been able to ascertain her condition beyond two weeks after the operation. The case, however, is recorded as an instance of the vesical affection in childhood.

F. T——, of Batley, aged twelve, had suffered for six months from too great frequency in micturition, being compelled to relieve the bladder four or five times an hour, sometimes seven or eight times in the hour. In addition, she had *quite recently* suffered pain in relieving the bowel. The urine was healthy.

Feb. 8th, 1871.—She was put under the influence of chloroform. Having sounded the bladder and not detected a stone, I then dilated the urethra and the neck of the bladder—at first with the finger, and then to a greater extent with the "probe gorget." On the same occasion I dilated the sphincter ani.

During the following week the frequency of micturition ranged from five to eight times in twenty-four hours, instead of five or six times per hour.

Feb. 21st.—Passes urine only three or four times a day.

CASE 4. *Vesical irritability of seven years' duration; cure by dilatation.*—On Dec. 8th, 1873, Mr. Ellis, of Shipley, requested me to see Miss H——, who had suffered more or less for seven years from irritability of the bladder. She attributed the disorder to having caught cold during menstruation. She had complained of pain and too great frequency of micturition by day and by night, having to relieve the bladder about every hour by day and four times at least, and occasionally eight or ten times, at night. She has at times passed pus, and once, five years ago, blood in the urine.

* Vide THE LANCET, Dec. 11th, 1875.

Being satisfied that all likely remedies had been tried, with the aid of Mr. Ellis I put her under the influence of chloroform and dilated the urethra.

A year after, January, 1875, in reply to my inquiry as to the result, Mr. Ellis writes: "You may place Miss H. on your list of cures; she is perfectly well."

CASE 5. *Painful micturition of six months' duration; cure by dilatation by Mr. Scattergood, Leeds.*—C. W——, aged fifty-one, for more than six months had suffered from very severe pain after each time of passing urine. Urine natural; no stone; no vascular tumour of urethra.

April 17th, 1871.—Mr. Scattergood dilated the urethra and neck of the bladder, until the urethra would admit the forefinger.

After the operation she had hardly any pain at any time, but partial incontinence of urine for a few days.

May 26th.—Reported well.

July 25th.—Sends word to the nurse that she continues well.

CASE 6. *Irritability of bladder of twelve months' duration; cured by dilatation by Mr. Horsfall, of Leeds.*—Amelia C——, aged thirty-eight, had been under various medical men for irritability of the bladder, and had taken all likely remedies. She had been constantly under treatment for nine months, and had suffered one year. She complained of great pain in micturition, and was disturbed seven or eight times every night.

Mr. Horsfall dilated the urethra with Weiss's dilator, so that the forefinger could be introduced. On the night of operation she passed urine once only, and the following night was not once disturbed—an event which had not occurred for twelve months.

Eight months afterwards there had been no relapse; she looked well, and had gained flesh; before the operation she looked haggard and worn.

CASE 7. *Incontinence of urine; apparently cured by dilatation by Mr. Horsfall, of Leeds.*—A dispensary patient had suffered from incontinence of urine for three months. "She generally passed her urine into the bed on waking in the morning."

After the usual means of treatment had been tried in vain, Mr. Horsfall stretched the urethra and neck of the bladder by Weiss's dilator. A week afterwards she reported that she had had no return of the incontinence. The pain ceased in twenty-four hours after the operation. She has not been heard of since. No notes were taken at the time, and the patient could not be traced. This short record is given me from memory by Mr. Horsfall, who, I believe, suggested to me the adoption of the operation in cases of incontinence of urine.

CASE 8. *Irritability of bladder of three years' duration; cured by dilatation by Mr. Seaton, of Leeds.*—Ann N——, aged forty, a domestic servant, had lived many years in New York, and had enjoyed good health until the year 1869, when she first began to suffer from a frequent desire to pass water and from great pain in doing so. She consulted several medical men, but obtained no relief to her sufferings. As her health was giving way, she decided, about April, 1871, to come over to England and visit her friends. At first after her arrival she thought that the rest had done her good, but she soon found her old symptoms return with greater severity than before.

Mr. Seaton first saw her in April, 1872. She was then emaciated, and had an unhealthy sallow complexion. She described her sufferings, from the frequent desire to pass urine and consequent straining, as being constant and severe, but much aggravated at night. On several occasions she had passed a considerable quantity of blood. Mr. Seaton found the uterus healthy and in its normal position, no calculus in the bladder, and the urine transparent and free from mucus and albumen. He tried a variety of remedies, but nothing gave relief but opium, and this relief was but temporary. As she became worse rather than better, Mr. Seaton took her into the infirmary, in order that he might dilate the urethra in the manner recommended by Mr. Teale. The operation was performed on July 15th, 1872, with Weiss's instrument, and was followed by incontinence of urine, which passed off in a few days. She left the infirmary a week after the operation, and at the end of a fortnight reported that she was able to sleep all night without being disturbed, and that she was completely relieved of the constant desire to pass water.

In October she called on Mr. Seaton to say that she was quite well, and that she was leaving for New York on the following day.

CASE 9. *Vesical irritability and vaginismus, of eleven years' duration; cured by dilatation by Mr. A. W. Robson, Leeds.*—Mr. Robson has kindly sent me the notes of the following case, which I give in his own words.

"I was called in to see Mrs. W——, aged thirty-seven, for another ailment, when I accidentally discovered that she was suffering from urinary symptoms. On asking her why she had not told me at first, she said she had thought that it would be useless, as she had been treated by several medical men in various ways, and at last had been told that nothing more could be done for her. She said that since she had craniotomy performed on her eleven years previously, her life had been one of constant misery, as she suffered from intense spasms of the vagina, which prevented coitus, and from a constant desire to pass water, never being able to retain it more than an hour, except at night, when she could hold it a little longer. I urged the necessity of an examination, which was granted. I found the vagina spasmodically contracted, so that the index-finger was introduced with great difficulty, causing great pain; the uterus normal; and the bladder apparently normal, as revealed by the sound. The urethral orifice was very prominent, the lips being thickened, forming an open ring. I advised dilatation, and, under chloroform, inserted Weiss's dilator, and dilated to the size of a half-crown, keeping the instrument in for about four minutes. After its withdrawal I easily passed the index-finger into the bladder.

"For the first few days after the operation the urine dribbled away, and after that she began to retain it, so that in a fortnight she could hold it for about two hours. She then went to the seaside for a month; and on returning, reported herself quite well. She had gained flesh, was in good spirits, was relieved of her vaginismus, and could retain her water several hours. I have since seen her, and she said that she had never been in better health than she then was. "A. W. ROBSON.

"Oct. 27th, 1875."

CASE 10. *Vesical irritability cured by dilatation; under the care of Mr. Edward Atkinson and Mr. John Hallilay, of Leeds.*—Mr. Atkinson has obliged me with the following note, in which this case is related by Mr. Hallilay.

"My dear Sir,—Mrs. R—— was confined about Christmas, 1873. There was no difficulty about the labour, and for a fortnight after she did quite well. She then began to complain of piles (which she had had before), and also of a frequent desire to pass her water, with considerable pain in doing so. Several medicines and applications were tried for some weeks, with little or no relief. She then said she would try without medicine. I believe she did so for a short time, and then applied to you. You gave the opinion that the irritation of the bladder was dependent on the hæmorrhoids, and recommended their removal. This was not done, and she grew worse, became emaciated, and was evidently breaking down under her sufferings. You then saw her with me, and proposed to try dilatation of the urethra. This you did. She obtained some mitigation of her symptoms at once, and from that time slowly improved. The hæmorrhoids disappeared as her general health improved, and she is now in good health.—Yours, &c.,

"E. Atkinson, Esq." "JOHN HALLILAY.

CASE 11. *Severe vesical irritability of many years' duration, relieved by dilatation by Mr. C. S. Smith, of Halifax.* — The following is Mr. Smith's account of this case:—

"On Oct. 31st, 1874, I was consulted by Mrs. H——, who was suffering from hæmaturia and great irritability of the bladder. The urine contained clots of blood, and was passed in small quantities at a time and very frequently, always with pain and straining. She was pregnant. The irritability of the bladder was of several years' duration, but the bleeding had mostly come on within the last year and a half. She had been under all sorts of treatment. On examination per vaginam, there was found a tender spot on pressing against the bladder just to the right of the median line, and on introducing a catheter there was pain on turning the point in that direction, and blood followed its withdrawal. She was ordered small doses of morphia, which

gave considerable relief to the pain, but not much to the frequency of micturition.

"On Jan. 3rd, 1875, she was confined of a healthy child.

"April 14th, 1875. — No improvement had followed her confinement. There was occasional bleeding. She had to pass water every ten minutes, day and night, with pain and straining. If she tried to delay emptying the bladder, the pain was intense. She was emaciated and exhausted by suffering and want of sleep.

"*Operation.* — Mr. Jukes gave chloroform, and I dilated the urethra, so that I could introduce the finger freely into the bladder, which was very contracted, hardly being of the size of a walnut. Just at the point which had been noted as being painful in the previous examinations a slightly raised hard patch was felt (an ulcer?), but there was no stone nor polypus. The immediate result of the operation was that the urine dribbled away. Every two or three hours she tried to pass water, but this was done without pain. She rapidly gained in strength. I hoped that by degrees the bladder would increase in capacity. This, however, has not been the case, and the dribbling still continues. She has, however, no pain, and is in good health, eating and sleeping well, and looking after her children."

Mr. Smith further remarks, in a note written on Oct. 25th, accompanying the foregoing report of this case:—"She has unfortunately not got on so well as I had hoped. At the time of the operation the bladder was very much contracted, and it appears not to have expanded since, and thus the patient is on the horns of a dilemma. Either she must allow the urine to dribble away or she must pass it frequently. This, of course, is a result we must be prepared for, if the operation is done in a case with a rigid contracted bladder. It must not, however, be thought that this patient has gained nothing by the operation. *She has lost all pain and spasm.* She can take her choice whether to empty the bladder or allow it to empty itself, which she could not do before. She can sleep at night, can go about and get exercise, and she is in very good health; whereas before she had to pass water with pain and straining every few minutes day and night, and was a wretched invalid. The disease which is at the root of the mischief is still going on. There is still tenderness and occasional bleeding from the bladder, especially on defecation when the bowels are confined, showing that disease of the bladder is still there. I cannot help thinking that the continued existence of irritability of the bladder must tend to produce the same sort of mischief in the kidney which we find in old cases of stone, where there is no real obstruction, but only a constantly contracted state of bladder, and therefore that by the conversion of the case into one of constant dribbling a great danger to life is removed.—C. S. SMITH."

(To be continued.)

NOTES ON DR. BROADBENT'S LECTURES ON THE PULSE.

BY T. CLIFFORD ALLBUTT, M.A., M.D. CANTAB.

IT is now some half-dozen years since, on one evening, I was talking with the late Dr. Anstie on the value of the sphygmograph as an instrument of clinical research, when he replied to my somewhat disheartened estimate of it, that its great value would not be in the detection of cardiac lesion, but in the better appreciation of constitutional states. This remark was a very fruitful one to me, and since that day I have more and more closely watched the quality of pulse and artery in various diseases. Perhaps little that Dr. Broadbent tells us is absolutely new to careful physicians, but, on the other hand, very little of it is popularly known even in the profession. My own experience tells me that the lecturer has put together very true and rather new things in a remarkably able way, and I trust henceforth they may form part of what lawyers call common learning. To one or two points I would refer.

First of all, I think that "worry" has far more to do with the production of high tension with impure blood than Dr. Broadbent quite admits. I believe it to be a more potent cause than good living, and it will be seen that a large number of the author's cases occurred in abstemious people. Now, abstemiousness and worry often concur in the same person—in fidgety, industrious, anxious creatures, who fret in circumstances where other persons would be restful enough, or who, in selfish or unselfish sorrow, have more than their own weight of misery to bear. In my experience, high-pulse tension with imperfect excretion is less common in happy, genial, and more or less bibulous men than in the careworn. In past years I used to be more surprised than I have been of late to fail to find a tense pulse and all the concomitant perturbations which (the neuralgias and the intermittent diarrhœa excepted) Dr. Broadbent has so admirably set forth, in persons whose blood would seem, from their habits, to have been constantly embarrassed with sickness. I am sure abuse of alcohol alone has not an exceptionally strong tendency to produce the state in question. My patients in this class have more often been upright, self-denying parents, worn out by the misdeeds of their children; men whose hopes have sickened in long lawsuits or in protracted business anxieties; women bereaved of all that they have loved, and who have hidden themselves away in weariness and self-neglect; poor professional men harassed by overwork, little reward, and many claims. These are the people in whom I have found the kind of pulse-tension here spoken of, and in whom I have often watched the growing sallowness and leanness, the twisting and growing arteries, the vertigo, the pains in head, neck, shoulders, or elsewhere, as the world has grown too hard for them. And their cure or relief must lie in the reverse of all this—in sunshine within and without, a hard thing for most of us poor English men and women whose inner life is darkening generation after generation, till our hearts grow as gloomy as our skies. Two remedies, not mentioned by Dr. Broadbent, I could urge as being invaluable in my experience; the first of which is Carlsbad water. I find this water, and Marienbad in milder cases or stages, to be a stream of life for those whose blood is laden with the sort of impurities which overcharge the heart and arterial tree. It makes mercurials far less necessary, and its prolonged alterative action is of course more desirable. My other remedy is residence at a high elevation. I have repeatedly seen a two months' stay at Mürzen, Pontresina, or the Œggischhorn, probably by accelerating respiration and skin action, cleanse blood which had been impure, and cleanse it in a way which kept it pure for long after-times. Finally, I think scarcely enough stress was laid upon the preservation of skin activity by bathing, rubbing, and warm clothing.

Dr. Broadbent's generalisation of cases in which a low blood tension is a leading feature was, I think, a very striking part of his lectures. Bromide of potassium with bromide of iron and strychnine has proved very valuable in my experience, as in that of the lecturer. But he does not seem to have tried ergot in these cases. For some time it has been my favourite drug for the relief of persons thus afflicted, and it may be given for months continuously without the least injury to the patient.

Leeds.

RARE CASES OF IRITIS IN CHILDREN NEAR THE AGE OF PUBERTY.

WITH REMARKS.

BY EDWARD NETTLESHIP, F.R.C.S.,

SURGEON TO THE SOUTH LONDON OPHTHALMIC HOSPITAL.

THE two following cases, illustrating a very rare event, the occurrence of uncomplicated iritis at, or rather below, the age of puberty, and without apparent cause, seem deserving of record; since simple iritis, unaccompanied by disease of either the cornea or the deeper structures, is scarcely ever seen below the age of puberty, excepting in infants suffering from inherited syphilis.

CASE 1. *A mild attack of iritis in one eye in a girl aged fourteen years; no complications; no cause assigned.*—Louisa P——, aged fourteen, came to the South London Ophthalmic Hospital on Aug. 18th, 1875, with slight inflammation of four days' duration in the right eye. There were all the

symptoms of commencing iritis: ciliary congestion, slight muddiness of the aqueous, and loss of brilliancy of the iris; but the pupil was still active. A two-grain solution of atropine was ordered. On the 21st the congestion had increased, the aqueous was duller, and the pupil, although showing no synechiæ nor any pigment spots on the lens-capsule, would not dilate fully with atropine, and remained oval after its use. Ordered to continue atropine drops and to take three-grain doses of iodide of potassium with ammonia. On the 25th the pupil had dilated more fully, and a single tag of adhesion was found at its upper part, the part which had hitherto responded least to the atropine. There was still moderate ciliary congestion, but no pain. At the next visit (28th) the eye was much better and the congestion had almost disappeared, and a week later (Sept. 4th) it was quite pale. Atropine was now discontinued, and a bitter mixture substituted for the iodide, which was depressing her. On the 11th the eye was still quite quiet, and I have not seen her since. The attack, although quite well-marked, was mild throughout, and showed no tendency to relapse. There were no opacities in the vitreous nor any disease of the fundus.

No clue was found as to the cause of the eye affection. Careful inquiry, both of the patient and her mother, threw no light on it. Neither rheumatism nor gout was known in the family; there was neither evidence of, nor any reason for suspecting, syphilis, acquired either in the ordinary way, by vaccination, or otherwise. There was no history of injury. She was a pale, rather thin girl, and her mother thought she had been losing flesh lately. She had not yet menstruated. She showed no signs of inherited syphilis.

CASE 2. *Iritis, acute and well marked, in one eye of a healthy boy aged fifteen; a thin membrane formed over pupil; no cause found.*—Henry P——,* aged fifteen, a healthy-looking boy, well nourished, and of good colour, came under care on December 23rd, 1874, for iritis of his right eye. At the first visit there was slight general haze of cornea, muddy aqueous, and great congestion, but no iritic adhesions. The congestion was chiefly conjunctival. I was quite unable at this or at any subsequent visits to find a cause for the iritis; the most careful examination of his person failed to detect any evidence of primary or secondary syphilis, and he denied, I think truthfully, ever having been exposed to risk of venereal disease. From the state of the genitals it is probable that he had not arrived at puberty. He was not subject to any arthritic symptoms, nor could he learn from his relatives that there were any such complaints in the family. I made special inquiry as to gout. He showed no evidence of hereditary syphilis.

At his next visit the signs of iritis were much more pronounced, and eventually the pupil became covered by a thin greyish-white membrane, and its edge considerably adherent to the lens-capsule. The fundus was examined repeatedly, and no disease of the vitreous was found. There was no ulceration of cornea whatever.

For the first week the case was treated with iodide of potassium, atropine and blisters; but finding on December 30th that he was decidedly worse, I ordered grey powder in two-grain doses twice daily, with the same of Dover's powder, omitting the iodide. This treatment, together with atropine, was continued for six weeks. The eye improved rapidly under it, and was quite quiet at the end of that time. All treatment was omitted for a month (February 17th to March 17th); at the latter date "relapse of ciliary congestion, no pain," is noted; treatment resumed for three weeks. On April 7th the eye was again quiet, and he has not been seen since the 14th. Not the slightest salivation or inconvenience occurred throughout the treatment, nor was his health apparently affected for better or worse.

It would not seem that these cases can fairly be placed in any one of the groups into which it is customary to divide the subject of iritis. The iritis of hereditary syphilis, occurring as it does in the secondary stage of the disease, and a few months after birth, could not include such cases as the above; while in neither of them was there any reason whatever for suspecting acquired syphilis. The large group variously known as "rheumatic," "arthritic," and "recurrent" iritis would not, I think, be commonly understood to include such cases as the above. Rheumatic iritis seldom if ever occurs under twenty years of age, and in a large majority of its subjects there is a history of some rheumatic affection; in men the rheumatic affection being often found to have begun as gonorrhœal rheumatism. Neither would the smaller group, first differentiated, I believe, by Mr. Hutchinson, consisting of iritis in adolescents who inherit the gouty diathesis, appear to admit cases resembling those above given. In the cases described by that author† the disease was characterised by its extremely insidious onset, and an almost entire freedom from the ordinary signs of inflammation, by the occurrence of opacities in the vitreous, and by the tendency to progress to closure of the pupil and secondary changes in spite of treatment. In the two cases narrated in the present paper not one of these leading characteristics of the heredito-gouty iritis was present, for the disease was acute, of comparatively short duration, and not accompanied by any visible change in the vitreous. Moreover there was no history of gout in the parents or ancestors of either patient—a negative fact which must be allowed some weight, although it cannot be taken as conclusive. It is scarcely needful to distinguish between the cases forming the subject of these notes and those groups in which iritis occurs as a complication of certain diseases of the cornea; particularly of interstitial (syphilitic) keratitis, and of certain forms of cyclitis with marginal ulceration of the cornea.†

A case, not at first sight comparable with those here described, but possibly illustrating an extremely severe result of a similar form of disease, I have recorded in the Ophthalmic Hospital Reports (vol. vii., p. 360.) In this case a healthy-looking boy, eleven years of age, lost his right eye from acute irido-cyclitis leading to inflammation of the vitreous and retina, without any adequate cause being discoverable.

A detailed record of all cases of uncomplicated iritis in children below puberty (excluding, of course, the infantile syphilitic cases) would probably throw much light on the causation of these rare forms of disease, and perhaps result in placing them within one of the already recognised groups of iritis.

Wimpole-street, W.

* Though the surname of each begins with P, the names are quite different, and the patients not related.

† See Clinical Lecture published in THE LANCET, Jan. 1873.

† For some very suggestive and valuable remarks on the latter disease by Mr. Hutchinson, see Ophthalmic Hospital Reports, vol. viii., pt. i., p. 6, under the title of "Mackenzie's Scrofulous Sclerotitis."

ON THE OCCIPITO-POSTERIOR POSITIONS IN MIDWIFERY.

BY JAMES MORE, M.D.

THE mechanism of labour is to a great extent a question of fine adjustment and adaptation between the fœtal head and maternal passages; and a labour, to be natural, must proceed so that the longest diameter of the fœtal ovoid adapts itself to the longest diameter of the pelvis, and this we know to be the right oblique.

Are, then, all presentations of the head occurring in other than the right oblique, and with the occiput looking to the left groin, unnatural? This has been answered in the negative by the younger Naegele, Simpson, and others, who maintain that the third position, occurring as it does so often, must rank as a natural presentation.

We know that when the forehead is primarily situated behind either the left or right foramen ovale, nature, as if aware the position is not the most satisfactory, attempts by a rotatory movement to bring the head into a position more favourable for delivery—viz., the occipito-anterior. Unfortunately, this rotation is not always accomplished, and thus it is we have so many cases of tedious labour when the presentation is either in the third or fourth position. I do not look upon occipito-posterior positions as always causing delay, but what I maintain is that in a large proportion of these delay does take place, and chiefly in those cases where nature cannot of herself change the position from the occipito-posterior to the occipito-anterior. The very fact that nature does attempt to rotate, coupled with the fact that most of our cases occur in the first position, leads me

to the belief that the first is the natural position, and all others are deviations, and likely to cause delay.

In all head presentations we must keep before the mind's eye the fact that the head is not only in the oblique diameter, but the head itself is presented obliquely—i.e., more of one parietal surface is felt than of the other. So far as my observation goes, all those occipito-posterior cases in which there is delay, in which nature cannot rotate, are those in which there is an abnormal tilting or obliquity of the fœtal head.

This tilting, indeed, occurs to such an extent that the ear can be invariably felt, and that without any force being used in the examination. In speaking of the diagnosis of these positions, Sir James Simpson says:—"In no case, I believe, will you find it necessary to force your finger up so far as to touch the ear of the child, as some authorities advise." Now this is quite true of all ordinary cases of "occipito-posterior" positions when the diameters of pelvis and maternal passages are in perfect accord as to size, &c., with the fœtal head. But when these positions occur where there is disproportion between the head and maternal passages, then we have great and abnormal parietal presentation, and the ear can be felt without the slightest difficulty. I may add that we cannot by any manipulation, short of course of introducing the hand, feel more than one ear.

Nor is it difficult to understand how this abnormal parietal surface obtains in these positions in certain cases. The spine of the child being attached nearer the occiput than the chin, and as the force of the uterus is transmitted along the spine, and as the long diameter of the fœtal ovoid presents at one of the oblique diameters, perhaps in some way not suitable for its transmission, it follows that one of the parietal aspects of the occiput (if I may be allowed the expression) will impinge on one or other of the pelvic sides or brims, thus causing a tilting either to one side or the other—in fact, causing the head to assume the third or fourth position. Such I believe to be the mechanism of those cases of occipito-posterior position in which natural rotation has not or cannot take place, and in which, I believe, instrumental aid is necessary.

No doubt every accoucheur has seen cases where nature, though not able to rotate, has yet accomplished delivery, with the forehead coming out under the arch of the pubis; but this was where nature could not help herself, and delivery was effected only after great expenditure of strength to the woman and manifest risk to the child. When she can nature will alter these positions, for she finds them not suited to the safe passage of the head; and what I hold is that when we find that rotation is not likely to take place, and the labour is in consequence protracted, we ought at once to put on the forceps and effect the required alteration. I am very far from advocating the use of forceps in all cases of occipito-posterior presentation, but in those cases only where there is this abnormal tilting of the head, where the ear can be easily felt, and where there is delay. Such cases seem to me to be truly deviations from the natural mechanism of labour, and, unless they quickly and spontaneously rectify themselves, should be assisted by the accoucheur. This truth was very forcibly placed before me in a case I had not many months since. It was the case of a highly nervous multipara with the head presenting in the third position, in which, though the parts were tense and tight, I had no difficulty in feeling the left ear. She objected strongly to the use of instruments, and I waited on and allowed nature to finish the labour; and a nice time she took to do it, over ten hours, under strong pains. The child's forehead was forced through the outlet without rotation, and afterwards the body of the child was forcibly turned round, as if nature determined to give me a forcible illustration of what ought to have been accomplished by art. There was a wheal along the child's head as if it had been struck with a whip, and the mother made a very unsatisfactory recovery indeed.

The diagnosis of these positions by the fontanelles is decided enough, but in many cases is a matter of considerable difficulty. In those cases above referred to, where it is almost always necessary to interfere, there is one method of diagnosis which, for practical utility, seems to me the best, inasmuch as it not only verifies the position, but indicates the direction in which the accoucheur ought to rotate. Thus, if the presentation is in the third position, we find the finger can be carried up easily to the left ear; if, on the other hand, it is in the fourth position, we can just as easily reach the right one.

The practical utility of this means of diagnosis is that, having assured himself of the presence of the ear, all the accoucheur has to do is to rotate *away* from the ear. Thus, in the third position he would rotate away from the left ear, bringing the forehead round to the left sacro-iliac synchondrosis; the occiput would then of course be opposite the right foramen ovale—in fact, he would change the third into the second position. And this is strictly following the mechanism of such cases which require no aid, for "the second position is an ulterior stage in the progress of cases which originally belonged to the third." In the same way, and on the same principle, if we have the fourth position we rotate away from the right ear, bringing the head into the first position.

Of course, if one is perfectly assured of the position from examination of the fontanelles, nothing more is wanted; but often this is a matter of difficulty, and, indeed, in some instances it seems to be impossible.

Rothwell, Northamptonshire.

CHLOROFORM IN THE TREATMENT OF HÆMOPTYSIS.

By ALEX. M'COOK WEIR, M.D., L.R.C.S. Edin.,
Assistant Medical Officer, County Asylum, Nottingham.

Now that the shelter of a great name no longer affords sufficient guarantee for the indiscriminate use of chloroform as an anæsthetic, it is only justice to the memory of the author of this once popular "pain killer" to record any item in its favour. It is with such a feeling, and, if possible, to provoke further inquiry, that I venture to publish the following case. My reasons for considering it sufficiently interesting and instructive in itself are subsequently given.

When assistant in the practice where I met with certain cases which I put upon record on the 20th November last, I was called in the middle of the night (my principal being absent) to see a gentleman who was reported to be dying of "vomiting of blood. The case was in town, and I was soon at the bedside of the sufferer, whom I found propped up by pillows and discharging every fifteen seconds a mouthful of frothy florid blood into a basin held by his sister. There was a slight cough preceding each expectoration, which, with the character of the blood, the heaving respiration, flushed cheeks, anxious countenance, and restless eyes, indicated the whereabouts of the mischief. The naked ear, however, applied to the chest, localised the hæmorrhage to the right upper lobe. The patient was about forty, of spare habit, a hard drinker, of strong phthisical predisposition, and, to drown a terrible social calamity, had committed an alcoholic excess before retiring to rest on the night in question. It was evident, from the gravity of the hæmoptysis, that something must be done beyond giving a reputed astringent and awaiting the results. A bladder of ice was therefore applied over the site of the hæmorrhage, a piece given the patient to suck, and a mixture of ergot and turpentine (twenty minims of each) administered every half-hour. There followed a partial cessation of the hæmorrhage, with some diminution of the respirations and a sensible falling in frequency of the pulse, which counted 150 on my arrival. This treatment was continued an hour, when the remedies seemed to lose ground, the patient assumed his former anxious condition, and the hæmoptysis became truly alarming. Hot bottles were applied to the lower extremities to maintain the patient's temperature, the ice was removed, and a mustard poultice applied instead. It soon became evident, however, that the patient was sinking, and the fact was more deplorable because he had lost his wife, who died the week previous of a lingering phthisis, and at the bedside was his only child, a beautiful girl of ten. A consultation was deemed superfluous, but an idea struck me, and leaving the house somewhat suddenly I found my way to the surgery, and immediately returned laden with a two-ounce phial of pure chloroform. I made a flannel pad corresponding to the site of the hæmorrhage, poured the contents of the phial on it, and forthwith applied it to the chest.

Towels and the bedclothes were superimposed to prevent evaporation and suffocation. The effect was instantaneous, and to my delight both cough and hæmorrhage ceased. The patient said he felt the sensation to his toes. Nothing now remained but a little gurgling in the larger bronchi, and there was no recurrence of the alarming flux. The ergot and turpentine mixture was continued, the chloroform left to fulfil its mission, and the patient to his friends at 3 A.M. Next day he was considerably revived; had had a little sleep and some food; the respiration and pulse were much fallen. Corresponding to the site of the flannel pad was a raw surface, which was clean and healthy-looking, and soon healed under simple dressing. A week after the patient was in the drawing-room, and had a fair appetite. Winter was at hand, and he was obliged to go out on pressing business much too soon, but was advised to winter in a more genial climate, and he had nearly made up his mind to do so when I left the district. I should state that an examination of his chest subsequent to the attack showed evidence of extensive tubercular disease. The right lung especially was as "dull as a board" in front, with moist crepitus on deep inspiration. To use an insurance term, his life could not, therefore, be considered "first-class"; and so it happened, for I learned soon after that, instead of wintering south, he committed another alcoholic excess, and so violent was the attack of hæmoptysis that ensued that he was dead before my worthy principal arrived. Just what one would expect, but he might have lived longer had he exercised temperance and discretion.

I consider this an instructive and interesting case—interesting from its physiological aspect, and affording a good illustration of that unbalanced state of circulation on which Dr. Fothergill insists. Here nature, being forced by excessive stimulation, detected the weakest part—the lungs. But had the liver or kidneys, or both, been affected, we could understand an abnormal stress upon them, either from untoward stimulation or a chill to the surface of the body, resulting in an attack of uræmic convulsions, or an apoplexy. The other, or therapeutical aspect, is equally instructive. Did the chloroform so relax the cutaneous circulation as to diffuse the blood more equally, and thus relieve the internal congestion and afford time for the formation of clots; or was the cessation of the hæmorrhage due to the direct counter-irritant effects of the drug? I am myself inclined to hold the former view, from the fact that the counter-irritation, though in the present case unmistakable and rapid, must have been secondary to the anæsthetic effects which the patient described as a "creeping sensation" down to his toes. There was no loss of consciousness or mental perturbation on the patient's part. Perhaps someone having had similar experience will give his views, not only on the *modus operandi* of the chloroform, but on the treatment of hæmoptysis in general. I see from THE LANCET of the 13th Nov. that ergot is popular at the National Hospital for Consumption; but pray what are we to do in cases of emergency, and where delay is worse than dangerous? Would the hypodermic injection of ergotine be so rapid and reliable in its action as to eclipse all other remedies, and was the remedy used by me scientifically and practically sound?

Nottingham.

ON TRACHEOTOMY IN CROUP AND DIPHTHERIA.

BY C. T. VACHELL, M.D. LOND.

I WILL assume that croup and simple laryngitis—including (*a*) the catarrhal, (*b*) the membranous, and (*c*) the herpetic forms—are synonymous terms, and that this is an essentially different disease from diphtheritic laryngitis.

In the progress of a case of simple laryngitis, as also in one of diphtheritic laryngitis, a point at length too often arrives when the symptoms resulting from the closing up of the air-passages with inflammatory products become identical. The treatment indicated in both cases is then the same—namely, some immediate relief to the urgent dyspnœa.

The question arises—Shall tracheotomy be performed? In other words, what prospect does the operation offer, in the particular case under notice, of saving the child's life? There is no doubt that it frequently fails—so frequently, indeed, as to deter many from advising it, except on rare occasions. But I would submit that many of these failures result from a want of properly selecting the cases in which to perform the operation.

Yet there are essential distinctions between those cases in which tracheotomy ought to be performed, and those in which, in my opinion, it is, as a rule, useless. It is with the hope of making these more generally recognised that the following remarks are offered.

In simple membranous laryngitis (croup) the inflammation and resulting membranous effusion are chiefly, and in many cases almost entirely, confined to the larynx, leaving the trachea free, or only slightly inflamed. In diphtheritic laryngitis, on the other hand, not only the larynx and fauces, but also the trachea, and even the bronchi, are covered with a thick membrane.

In the latter case it is evident that the dyspnœa would be but very slightly relieved by opening the windpipe, for the whole extent of the air-passages is choked. But in the former it is very different. Here the obstruction is confined to the larynx. Remove this, and air enters the lungs freely. Tracheotomy would, therefore, in this case offer a very fair chance of saving life.

Whilst holding the post of resident accoucheur at King's College Hospital I had many opportunities of examining after death cases in which tracheotomy had been performed in diphtheritic laryngitis. In these I invariably found that the false membrane was not confined to the larynx and fauces, but extended down the trachea, and on into the smallest divisions of the bronchi. I was struck with the inutility of the operation in these cases. Such cases, unfortunately, occur far more frequently than those of simple membranous laryngitis. I will proceed to show how the two classes may be recognised.

It is usual, when endeavouring to ascertain if a certain case be one of croup or one of diphtheritic laryngitis, to note the suddenness of the onset, the presence or absence of an epidemic, presence or absence of white patches on the tonsils, flush or pallor of the cheeks, condition of the urine, &c.; but in addition I would point out the necessity of producing vomiting and carefully examining the vomited matter for pieces of false membrane.

If casts of the trachea, or long shreds of false membrane, are discharged, as is usually the case in diphtheritic laryngitis, the inference is that it extends down the trachea and on to the lungs; but if throughout the case none such can be discovered, either coughed up or vomited, then, other symptoms agreeing, I should consider the case to be one of simple laryngitis, and should unhesitatingly advise tracheotomy.

Another point of importance is involved in the above. Text-books teach that the operation is often postponed too long—that it is, in fact, used simply as a last resort; but surely this is exactly when it should be performed. Ordinary treatment suffices for the cure of mild cases of laryngitis, and it is only when this has failed, and suffocation is imminent, that tracheotomy is called for.

When the false membrane extends to the lungs I deem the operation, as before said, useless as a rule.

The following case will serve to illustrate the above.

S. A. M——, a girl aged three years and a half, had enjoyed robust health up to the present illness. She got her feet wet on July 27th, but did not appear to suffer in consequence until Aug. 2nd, when she appeared out of sorts. On the following day the mother noticed a wheezing in the child's chest, and thought she had taken cold. The child passed a restless night, and often asked for drink; she once coughed in a croupy manner. Towards morning, on Aug. 4th, dyspnœa increased. I saw her first at 3 P.M., and found then a well-nourished, healthy-looking child, suffering from great dyspnœa, and with a distinctly croupy cough. On examining the back of the mouth and throat, no trace of false membrane could be seen, but the parts were red, and somewhat swollen. Pulse 140; temperature 102°; respiration 40.

She was placed at once in a steam tent, hot fomentations were applied to the throat, and an emetic, consisting of one drachm of ipecacuanha wine, was administered and repeated. Vomiting soon followed, but although the vomited matters were carefully examined, no piece of false mem-

brane of any considerable size could be detected. The dyspnœa lessened somewhat towards night. No albumen in the urine.

Aug. 5th.—Slept well for several hours in the night. The dyspnœa, however, began to increase soon after she awoke in the morning, and towards midday became very severe. Pulse 160, weak; temperature 102°; very restless. The emetic was frequently repeated, but no false membranes were discharged. She died at midnight.

Autopsy, fifteen hours after death.—The larynx and trachea, having been removed, were opened from the back. The epiglottis and the whole interior surface of the larynx were intensely congested and much swelled. The trachea was also congested almost to the bronchi. The under surface of the epiglottis, the whole interior surface of the larynx, and about half an inch of the trachea were covered with a thick false membrane. Pharynx congested.

Remarks.—This was undoubtedly a case of simple membranous laryngitis; the inflammatory action, which was purely local, was centered and almost entirely confined to the larynx. Tracheotomy was not permitted, but it is evident, from the post-mortem examination, that had the operation been performed, the child's life would in all probability have been saved.

Cardiff.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

THREE CASES OF EXTENSIVE EPITHELIOMA INVOLVING THE LOWER JAW; REMOVAL BY SECTION OF THE BONE AND THE GALVANIC ECRASEUR.

(Under the care of Mr. CHRISTOPHER HEATH.)

THIS week we commence the publication of an interesting series of cases of epithelioma of the tongue, involving the lower jaw, treated by section of the bone and removal of the diseased structure by means of the galvanic écraseur. The success of the subjoined case was marked. Although nearly the whole of the tongue with the sublingual tissue and three inches of the lower jaw were removed, the patient made an excellent recovery, and has—for a time at least—got rid of a disease that, left to itself, would have speedily proved fatal.

For the notes of the cases we are indebted to Mr. A. P. Gould, M.S., surgical registrar.

CASE 1. *Epithelioma of the tongue, involving the lower jaw; removal of the growth and three inches of the lower jaw; recovery.*—E. J——, aged fifty-two, was admitted Sept. 21st, 1875. He was unable to move his tongue, and saliva trickled down his chin; articulation was very indistinct; he was quite unable to chew, but could swallow fluids readily; the breath was very offensive. The front teeth of both jaws were worn down and decayed, and all the teeth in the lower jaw were very loose. The gums on the left side of the lower jaw were swollen, thickened, and irregular, the surface being covered with firm, solid granulations; this tissue extended between the teeth, into the floor of the mouth, and to the tip of the tongue, which was fixed to the lower jaw, being blended with this growth on the gums. The growth in the gums did not extend beyond the middle line. Under the right angle of the jaw there was one enlarged hard gland; on the left side there was a mass of hard tender glands. The patient complained of pain in the lower jaw, and of a very severe shooting pain and tenderness in the occipital region. This latter pain was so severe as to make him writhe in great agony at times. The patient was thin, looked worn out with pain, and expressed himself willing to undergo any operation for relief. The history he gave was that in January, 1874, he noticed one of the glands under the jaw on the right side become tender and swollen, and a few days after a sore appeared under the left side of the tongue, which soon went away; he also had an ulcerated throat at this time. The gland was painted with iodine, and became considerably smaller and ceased to trouble him, but in September following it swelled again and broke, discharging pus. About this time (twelve months before admission) he noticed difficulty in articulation, his tongue being stiff; this rapidly got worse, and at Easter, 1875, his tongue was quite fixed to the jaw. He then went into St. Bartholomew's Hospital, where a part of the tongue was removed, which greatly relieved him for a time, but he soon began to get worse again, and then was sent into University College Hospital. He stated that he had been a great smoker, generally using a clay pipe. He had been quite unable to take solid food for a year before admission. No history of syphilis, tubercle, or cancer. He was ordered spoon diet, four eggs, and four ounces of brandy. Hypodermic injections of morphia were given for relief of pain.

On September 29th Mr. Heath proceeded to operate. The patient was placed under chloroform, and the incisor, canine, and first bicuspid teeth were extracted; two pairs of clamp forceps were applied to the under lip about three inches apart, so as to compress the coronary vessels, and a vertical incision along the middle line was made down the lip and continued to the hyoid bone; the healthy integuments were dissected back from the jaw on each side, and the bone was sawn through on each side an inch and a half from the symphysis. The wire of the galvanic écraseur was then applied round the mass thus loosened, which was drawn forwards by vulsellum forceps, and included nearly the whole of the tongue and all the sublingual tissues. For eight minutes a low current was passed, which was then increased a little, the whole process occupying twelve minutes. A piece of whipcord was passed through the stump of the tongue, which was gently drawn forwards and sponged with perchloride of iron. The edges of the wound were then brought together by three hare-lip sutures, and a fine silk thread through the mucous membrane. The lower part of the wound was left open to serve as a drain; the whipcord ligature was fastened to one of the pins to prevent the tongue falling back. A hypodermic injection of one-quarter of a grain of morphia was given, and the patient was then carried back to bed.

The patient passed a good night, sleeping a great deal. At 4 A.M. and at 7.30 A.M., an enema of egg, beef-tea, and brandy was administered. A good deal of saliva and blood-stained serum escaped through the opening into the floor of the mouth. Next morning the temperature was 99°; pulse 72, regular, and fairly strong; he said that the pain at the back of the head was less. He was fed through a catheter passed into œsophagus every two hours during the day, and had two nutrient enemata at night, but afterwards he was fed only every four hours, taking six ounces of brandy in the twenty-four hours. He complained of a painful swelling under each angle of the jaw.

On October 1st a swelling as large as half an orange was noticed over the manubrium; it pitted on pressure, had a distinct edge, not tender, and was movable over the bone. The tongue was unfastened from the lip, but the whipcord was left in the tongue for a few days longer, to enable the patient to draw it forward when he was fed and whenever he felt a choking, which came on whenever he lay down. At night, as he was found to be weaker, brandy was increased to nine ounces. On Oct. 3rd the two upper pins were removed from the lip, and strapping applied across the jaw and lip. The stump of the tongue was covered by a black eschar, and on the tonsils and anterior pillars of the palate was a white exudation. There was a free discharge of saliva and turbid foul-smelling fluid through the drain under chin; the patient wore an oakum bib to catch this. There was considerable swelling on each side of the neck below the jaw, and the swelling was tender and very painful. The mouth was washed out with Condy's fluid several times a day, and the sloughs painted with glycerine of carbolic acid. Next day the lowest pin was removed, and the incision in the lip was found to be entirely healed, except at the lowest part, which was purposely left open.

Oct. 4th.—Temperature 98·5°; pulse 80, much stronger. The swelling over the sternum had almost entirely disappeared. The pain in the head was as bad as ever.

For the next week the patient slowly improved; the slough

and exudation cleared off the tongue and mouth; the swelling in the neck gradually subsided and became less, as did also the pain in the head; the temperature was not above the normal. As the Condy's fluid failed to keep the mouth sweet, it was syringed out with a dilute solution of terebene, which was followed by a most marked improvement in this respect. After the 4th the nutrient enemata were discontinued.

On Oct. 11th it is noted that he was better, with less pain in throat and head, and that he looked more cheerful; the whole of the stump of the tongue was free from slough; a little slough was still adherent to the surfaces of the bone; the ends of the bone had approximated a good deal, and on the 15th were only half an inch apart. After Oct. 16th the pain in the head disappeared, and only very occasionally returned slightly; he began to pick up his strength fast, slept well, was cheerful, but complained of pain behind thyroid cartilage when the catheter was passed; pressure over the thyroid also gave pain, and a hard tender lump under each angle of the jaw troubled him. He had poultices applied to these on Oct. 20th, which relieved him very much, so that on the 26th it was noted that no lump was to be felt on either side, and that he was quite free from pain except in the pharynx. On Oct. 29th the two pieces of the jaw were in contact, though not united; there was still slight discharge through the opening into the mouth, but this healed up by Nov. 4th.

On Nov. 8th the patient was sent to Eastbourne, and returned to London on Dec. 11th, when he was seen at the hospital. He was very cheerful, and very pleased with the result of the operation. He was able to drink out of a feeder, and swallow without difficulty. The two pieces of the jaw were in close contact, and only very slight movement could be obtained between them. Patient could make himself understood, though his articulation was very indistinct. The chin was behind the upper jaw, but the disfigurement was not very conspicuous. There was no recurrence of the growth, and no enlarged glands under the jaw. He had had no return of the occipital pain.

The growth was examined by Mr. Gould, and found to be undoubted epithelioma, cylindrical processes of large oval fleshy epithelial cells being seen, without any of the ordinary concentric "globes" of cells, though in the above-described cylinders a concentric arrangement of some of the cells in the middle, approaching that of the "globes," was found. This tissue was found under the tongue, just extending up into it; in the gums, and extending back quite to the line of removal.

SEAMEN'S HOSPITAL ("DREADNOUGHT").

A CASE OF AORTIC ANEURISM, GIVING RISE TO GENERAL DROPSY; AUTOPSY.

(Under the care of Dr. RALFE.)

THE following case is interesting, not merely from the difficulties attending the diagnosis, but also from its exhibiting a rare complication arising from the pressure of the aneurismal tumour. The notes of the case (condensed) have been furnished by Dr. H. LAW, the house-physician.

S. H. G——, aged thirty-seven, was admitted January 27th, 1875, complaining of general dropsy and chronic dysentery. He stated that his general health had been good till twelve months ago, when he had rheumatic fever, for which he was treated at the Shanghai Hospital, his employment being that of a pilot on Chinese rivers. After his discharge from the hospital he acquired dysentery, and three months before his admission dropsy set in, beginning in the lower parts and gradually invading the general integuments. No urinary derangement had been noticed.

When admitted he presented great general œdema of all parts below the neck, slight lividity of face, occasional cough with frothy sputum, dyspnœa on exertion. No thoracic abnormal dulness could be made out; heart's impulse barely perceptible through the greatly distended integument; sounds feeble; coarse crepitation at the bases of both lungs. No increase of hepatic or splenic dulness. Apparently some fluid in abdominal cavity. Urine diminished in quantity; no albumen. The stools were frequent (five to twelve a day), bloody, lumpy, and slimy. No history or evidence of syphilis.

The dysentery, under the castor oil treatment, yielded about the end of April. The dropsy increased till the legs and arms attained an enormous size, but in other respects for some time he improved. The shortness of breath was trifling and never paroxysmal, the cough abated, and he had no pain. Occasionally a faint short murmur of a rough character, intensified after a forced inspiration, was audible at the sternal end of the sixth left costal cartilage, not conducted in any direction. The urine remained free from albumen till a few weeks previous to his death. Puncture of the legs gave him relief for a short time, but effusion into the left chest presented itself about the end of June, and he sank. Death occurred on June 30th. Some time before his death a naval surgeon visiting the hospital recognised the patient, and remembered his having been in the Chinese Hospital; and he stated that it was thought at that time the man had some cardiac valvular mischief.

At the post-mortem examination a considerable quantity of fluid was found in the left pleura and abdomen. The pericardium was adherent, and a sacculated aneurism of the ascending aorta developed chiefly to the right side and posteriorly; from this aneurism another, smaller, projected forwards in close contact with the right auricle, which no doubt during life was pressed on by it; valves healthy and competent. The other organs presented nothing of special interest.

Dr. Ralfe observed that the difficulties attending the diagnosis of this case were of no ordinary kind. The history of the case, the statement that a valvular lesion had been detected some months previously, the presence of general dropsy, and a certain degree of bronchitis, led to the supposition that the obstruction to the circulation lay in some defect of the valves. Nor was the absence of any murmur that could be considered endocardial, opposed to such a view. At the same time, the possibility of the obstruction being caused by some thoracic tumour was not lost sight of. The patient being naturally fat rendered it difficult to detect any increase of abnormal dulness, and this difficulty was augmented by the dropsy in the integuments. Naturally, however, from the position and direction of the tumour, the dulness, even in a leaner person, would not have been very appreciable. The dropsical condition of the integuments also prevented an impulse being communicated. There was no pain, and all the usual pressure symptoms of thoracic tumour were absent. Dr. Ralfe thought the condition revealed by the post-mortem sufficient to account for the dropsy. The right auricle, when charged with blood during life, would be in contact with the smaller and laterally projecting aneurism, and thus a considerable amount of obstruction to the circulation would be produced.

BRADFORD INFIRMARY.

CASE OF HÆMATEMESIS.

(Under the care of Dr. REGINALD G. ALEXANDER.)

THE following record of a severe case of hæmatemesis is interesting as illustrating how much a regular, temperate life will sometimes do for apparently some of the worst cases of cirrhosis of the liver from spirit-drinking.

A. B——, aged thirty-four, a clerk, was admitted into the hospital on Feb. 21st, 1872. The patient states that eighteen years ago he had an attack of rheumatic fever which confined him to the house for three months. Twelve years ago he began to spit blood, and continued to do so for six months. Fifteen months ago he had inflammation of the liver, and three months ago jaundice. Having been crushed in a crowd eighteen days since, a feeling of great oppression in the region of the stomach followed, accompanied by cold sweats; and during the same evening vomiting of blood in large quantities took place. He also passed blood by the bowels. He has been a very heavy spirit-drinker and smoker, and upon admission had a sallow, blanched, and cachectic aspect. Diastolic murmur at the base of the heart.

Feb. 23rd.—He complains of a sense of fulness in the epigastrium, and passed a copious black motion. Ordered perfect rest and a mixture with digitalis.

24th.—Passed a restless night, and vomited a quart of blood. Ordered thirty minims of solution of morphia, with fifteen grains of tannic acid, every four hours. Small

quantities of milk and soda-water, ice to suck, and ice to be applied to the abdomen. At 4 P.M. the pulse was scarcely perceptible, and he appeared to be sinking rapidly. Ordered one ounce of brandy mixture every hour, and a pill with half a grain of morphia and two grains of mercury pill.

25th.—Patient somewhat rallied. Ordered ten grains of gallic acid and ten minims of solution of morphia in an ounce of infusion of roses, every three hours. No food to be taken by the mouth, and only nutritive enemata to be given.

26th.—Vomited eight ounces of blood and passed black motions. The medicine of the 25th to be continued, and no food to be given by the mouth.

27th.—The patient neither vomited nor passed any motion. Ordered half a dozen oranges.

28th.—Motions still black. Pulse 115; temperature 97·2°. Injection stopped and food cautiously given.

29th.—The patient desires a glass of beer; half a pint allowed to be taken in spoonfuls at a time. Pulse 92; temperature 99·2°. Is very restless at night. Ordered six grains of lead with opium pill, two grains of calomel to be taken at bedtime, and a mixture of dilute nitro-hydrochloric acid with infusion of gentian during the day.

March 1st.—The pills of the 29th of February have been continued each night, and have secured ten hours of sleep. The patient is much refreshed, and declares himself to be well. Was discharged cured in ten days from this date, and on the 10th of April he wrote to say that he had had no relapse.

Remarks.—This case is one which is often seen at hospitals, the subjects being generally men of very intemperate habits, and the patient's condition on the 24th of February illustrates the state of utter prostration which may follow loss of large quantities of blood without a fatal issue. A few weeks ago (December, 1875) the man was in very good health, and, having changed his habits, the cachectic look he had upon admission into the hospital had entirely disappeared.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THIS Society met on Jan. 11th, when the chair was taken by Mr. John Marshall, F.R.S., Vice-President. The first paper read consisted of a contribution to the spectroscopic examination of morbid fluids by Dr. Moss, now with the Arctic Expedition as surgeon to H.M.S. *Alert*. This was followed by a paper by Mr. Butlin, recording the histological characters of two mammæ, the areolæ of which had been the subject of long-standing eczema. The note was of interest taken in connexion with a recent contribution of Sir James Paget as to the frequency with which cancer of this organ is preceded by areolar affection. The meeting was not well attended, and the discussions on the papers read did not raise many points of interest.

The following is an abstract of a paper entitled, "Notes on Pathological Absorption Spectra," by Dr. Edward Lawton Moss. Urine absorbs the shorter light waves indiscriminately, but the great range of colour possessed by various urines does not display an equally conspicuous diversity of absorption spectra, and the complicated chemical colouring matters bring none of their confusion into spectroscopic observations of fresh urine. The spectroscope yields the earliest evidence of the hæmaturia of Bright's disease. The existence of blood bands in the absorption spectrum of urine gives far more definite evidence than mere smokiness or albuminurin. A case of cirrhosis of the liver supplied a urine which, for the three weeks it was watched, gave a permanent absorption band not mentioned by Thudichum. It also exhibited a well-defined, intense band lying between 1700 and 2100 of Kirchhoff's scale, which became more intense as the urine became staler and more acid, and it suggested the existence in the urine of biliary products. Experiments on the bile of animals and on meconium failed to produce any similar absorption band, but it was found in normal acid fæces. It disappeared on neutralisation with ammonia, and reappeared on reacidulation, the substance yielding it seeming to be some free acid. It is soluble in alcohol, but not in ether. These notes seem to show that the application of the spectroscope may decide whether the high-coloured urine of a tropical pyrexia owes its tint to the altered bile of bilious, or the disorganised blood of yellow fever.—The PRESIDENT, in inviting a discussion upon this paper, pointed out its value as indicating a new line of research upon the pigmentary constituents of the urine.—Dr. ORD remarked that he habitually used a spectroscope as an aid to the investigation of the urine, and he quoted a case lately under his care, in which, although the urine contained no blood-corpuscles, and but a small quantity of albumen, he was enabled to detect the presence of hæmoglobin by the existence of the double line in the spectrum. He thought this to be a far more valuable method than the colour-test in which guaiacum was employed.—The PRESIDENT said that it must be remembered that Dr. Moss had discovered new bands in the spectrum, which he attributed to altered bile pigment.

A paper was then read "On the Minute Anatomy of Two Breasts, the areolæ of which had been the seat of long-standing Eczema," by HENRY T. BUTLIN, F.R.C.S. The investigation of these two breasts was made on account of a supposed connexion between chronic eczema of the nipple and areola and cancer of the breast. One of the breasts was removed by Mr. Savory from a lady sixty-seven years of age, on account of a long-standing eczema, and with a view to anticipate the development of cancer. To the naked eye the organ showed no change except in the nipple, which was retracted, and its areola was covered by eczematous scabs. The second breast was removed by Mr. Smith, from a patient in St. Bartholomew's Hospital. She was fifty-two years of age, and had suffered from eczema of the nipple for three years. Two or three months before excision, the breast had become indurated in its upper part. The operation was decided on, as in Mr. Savory's case, as a precautionary measure. The indurated portion presented to the naked eye the characters of cancerous infiltration. The following is a summary of the histological characters, which were precisely similar in the two breasts. 1. The mucous layer of the epidermis of the areola was in a condition of proliferation, and was increased in thickness. In places the cells were separated by fibrous filaments and spindle-shaped elements. 2. The corium and subcutaneous tissue were the seat of small-cell infiltration. 3. Distension and dilatation of the galactophorous ducts, which contained masses of proliferated epithelium. 4. Round-cell infiltration in the vicinity of the ducts. In the second case the seat of induration presented great enlargement of the acini, which were filled with epithelium; some of them widely separated by small-cell infiltration of the connective tissue. No actual cancer structure was discovered. The changes in the deep layer of the epidermis and in the corium were such as are described by Neumann and Biesiadecki in chronic eczema; but the most striking feature in the investigation was the existence of widely-spread implication of the gland-ducts and acini in the morbid process, as if by continuity from the cutaneous disease. In many places the glandular epithelium was separated by spindle cells. It is impossible to say that cancer would have become developed in either organ, but the examination showed that changes could be induced in a deeply-seated organ by changes on its surface.—Dr. DOUGLAS POWELL said it would be interesting to know a few more of the clinical features of these cases—e.g., as to the cause of the eczema; its relation to suckling; was there any hereditary history of cancer?—Dr. THIN believed that the spindle-shaped elements which had been described by Biesiadecki as occurring in the mucous layer of the epidermis were normal structures. He had frequently met with small branched cells interlacing with the epithelium of the cornea, and these cells were readily brought into view by a very slight amount of inflammation. So also with regard to similar spindle and branched cells between the epithelium of acini and ducts; he had noticed them in the ducts of sweat-glands, and Mr. Watney has described like elements in the intestinal mucous membrane. He questioned whether the term "proliferation" could be applied to the changes in the mucous

layer of the epidermis. Was there not rather indication of division of nuclei due to changes in the cells, and the formation of new cells, not from the pre-existing elements, but from the ordinary source?—The PRESIDENT stated that there could be no doubt as to eczema being a possible cause of cancer, but it does not follow that eczema of the nipple was necessarily followed by cancer. He had, indeed, seen one such case, but he did not think the eczema played any other part than as an exciting cause; just as continual irritation from a carious tooth would produce epithelioma of the lip or tongue. In the case he referred to there was a strong hereditary disposition to cancer. He thought, however, that it was only by the accumulation of such observations as the present that any light could be thrown upon the subject.—Mr. BUTLIN, in reply to Dr. Powell, stated that in neither case could any exciting cause of the eczema be traced. Both patients were long past child-bearing, so that suckling could not have operated as an exciting cause. Nor was there any hereditary tendency to cancer in either case. He did not think that it was very material whether the changes he described in the deep layer of the epidermis were attributed to proliferation of the cells or to the new formation of others. It was enough to state that more cells did occur than should normally be present, and to describe this he had used the current phrase "proliferation." Although spindle cells may occur normally between epithelial elements, yet in these conditions as he had described they were no doubt much increased. He had seen them largely developed in intracystic growths. The chief point he wished to raise was the existence of such marked changes so deep below the surface.

A paper was then read on the "Etiology of Skin Disease," by Mr. G. GASKOIN. It was intended to show the constitutional character of skin complaint and the importance of recording the health of the patient's family as well as his personal history. A *rationale* of skin disease was sought for in the hereditary dyscrasiæ which are rarely absent in the patient's antecedents, and they are generally commutable with it. This is so much the case as to suggest for adoption that law of heredity which is known as *metamorphosis of diathesis*. It is well exemplified in pulmonary and arthritic conditions, but as less recognised it is here insisted on as found in nervous affections, such as insanity, epilepsy, imbecility, deaf mutism, and certain abnormalities and deformities. The similarity of results from specific fevers, and those of inherited transmission, suggest an impairment of vitality as best expressing the nature of skin complaint which seems to depend essentially on want of vigour in the constitution. Parasitic diseases were mentioned as not excluded from the influence of diathesis, and modern dermatology was accused of too exclusive an attention to the objective phenomena of disease.—Dr. DRYSDALE commented upon the rarity of skin affections in phthisical subjects. He had very rarely met with them, and could by no means corroborate the author's statement as to phthisis playing a large part in the etiology of skin disease. Nor had he met with the association of rheumatism and phthisis. He had seen several cases of ichthyosis associated with asthma.—Dr. D. POWELL concurred with Dr. Drysdale respecting the rarity of skin disease in phthisis. Beyond chloasma and sudamina, cases of skin affection were rare in phthisis, and he believed that in those cases in which such do occur they are probably syphilitic. He thought that in many cases of phthisis there was distinct evidence of a rheumatic diathesis. His attention had been first called to this by Dr. Reginald Thompson. In reply to a question from Dr. Drysdale, Dr. Powell stated that in several of his cases of phthisis in which there was a history of rheumatism, there was no cardiac affection.—Mr. S. WATSON pointed out that the author of the paper dwelt rather upon the fact of skin diseases, such as acne, occurring in the progeny of phthisical parents, than in the subjects of phthisis themselves. He was not himself able to endorse this, but he had certainly met with many cases of lupus in the subjects of phthisis, and in those who came of a phthisical stock.—Mr. WARREN TAY confirmed Mr. Watson's statement as to the frequency of lupus in patients with a family history of phthisis. Occasionally there was a distinct history of the hereditary transmission of lupus itself. In one case the daughter and sister of a subject of lupus also suffered from the disease. Psoriasis was undoubtedly a hereditary disease, being transmitted through more than one generation.—Mr. GASKOIN briefly replied, and the Society adjourned.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting on Wednesday, January 5th, W. O. Priestley, M.D., President, in the chair, the following gentlemen were elected Fellows of the Society:—Ed. J. W. Hicks, M.B., Charles Henry Johnson, M.R.C.S., and Francis Boynton Lee, F.R.C.P. Ed. (Heckmondwike).

Dr. WILTSHIRE exhibited a new Liquid Extract of Ergot, prepared by Mr. Martindale, of New Cavendish-street. It was made with ammoniated alcohol, and was a remarkably active preparation of the drug.

Dr. AVELING presented a pair of Curved Short Forceps.

Dr. EDIS exhibited a specimen of Cyst of Larynx in an infant, removed post mortem, where death ensued thirty-seven hours after birth. On Nov. 30th, 1875, the mother was delivered at 9.30 A.M. of a living, apparently healthy, well-nourished female child, weighing 8 lb., and twenty inches in length. The duration of labour was eight hours. The child seemed to experience difficulty in breathing and sucking, and gave vent to a more or less continuous kind of feeble wail. Nothing abnormal could be detected on the most careful examination. It died within thirty-seven hours of its birth, and on examination, post mortem, a small tense cyst, the size of a small hazel-nut, was discovered attached to the side of the larynx, and nearly closing up the aperture. No other abnormal condition was detected.—Dr. BARNES thought the specimen of sufficient interest to be figured in the Society's Transactions.—Dr. SAVAGE seconded the proposition.

Dr. WILTSHIRE exhibited for Dr. BATHURST WOODMAN a specimen of Carneous or Fleshy Mole, sent up by Mr. Robert Hughes, of Woodbridge. The patient from whom it was removed was one of fifteen, aged twenty-nine. She had miscarried a twelvemonth before, at about the fifth month. On Aug. 15th, 1875, she was delivered of a full-grown healthy male child. On examination a large tough substance, about twice the size of the fist, attached to the placenta, was detected and removed together with the latter. It closely resembled a large kidney. The points of interest in the case were the hereditary proclivity to plural births, the patient's mother having had two twin births in succession, and the absence of any known cause for the death of one twin, the other reaching to full maturity. There was no symptom of syphilis in the parents.—Dr. J. WILLIAMS inquired if there was any history of threatening hæmorrhage or abortion.—Dr. WILTSHIRE said he knew nothing more of the case than had been read. There was evidently an attempted formation of the arms and one or more eyes.—The PRESIDENT remarked that the specimen had somewhat the appearance of a placenta succenturiata. He suggested a further examination of it by Dr. Barnes, Dr. Williams, and Dr. Woodman.

Dr. ROUTH communicated the particulars of a case of Extra-uterine Fibroid of large size, removed successfully by gastrotomy from a patient aged thirty-two. The tumour weighed over 17 lb. Five days after the operation, the temperature rose to 105° in the axilla, the vaginal temperature being 106·4°. She was then placed bodily in an ice-water bath, and kept in for three-quarters of an hour; consciousness returned, and the temperature sank to 100°; the axillary temperature a quarter of an hour later being 97°. A week subsequently, the temperature having again risen to 104°, the ice-water bath was repeated, which reduced the temperature to 99°. Eighteen days after the operation about five ounces of intensely fetid, grumous, bloody pus was removed with the aspirator per vaginam, and the cavity washed out with weak iodine. The pulse fell from 112 to 86 the same day, and the temperature in the vagina from 104·2° to 102·4°, it being 99·7° in the axilla. The abscess was subsequently opened per rectum, and a drainage-tube kept in. After rather a protracted illness, the patient recovered perfectly. — Dr. ROGERS, who had assisted at the operation and during the subsequent treatment of the case, remarked upon the after-treatment being

most successful, and thought great credit was due to Dr. Routh for his management of the case throughout.—Dr. BARNES regarded the specimen as one of a fibroid tumour springing from the uterus. In many instances they retained a close union with the uterus. In some cases they seemed to be of ovarian origin, and it was a question whether they could be regarded as uterine.—The PRESIDENT said that Dr. Routh's case was remarkable in more than one aspect, and he trusted that so interesting a communication would not be allowed to pass without full discussion. The points he thought of special practical importance were the success of the treatment, when the temperature was high and the symptoms threatening, by the ice-bath, and the obvious abatement of septicæmic symptoms when irritating fluid was tapped from the peritoneal cavity through the rectum.

Mr. G. D. BROWN (of Ealing) exhibited a specimen of Malignant Tumour of the Omentum (removed post mortem) weighing over 17 lb., which, taken in connexion with Dr. Routh's case, had many points of collateral interest. The patient, a lady aged thirty-six, had observed the growth of the tumour for at least two years. Opinions had varied as to the nature of the case, but Dr. H. Smith, who had also seen the case, and Mr. Brown, both regarded it as a malignant disease of the omentum. She had been under Dr. H. Smith's care at Soho, where an exploratory incision had been made, when the growth was found to be so extensive and deeply seated as to make its removal a practical impossibility. The pain during the growth of the tumour was at times very distressing. The tumour was firmly adherent to the peritoneum at the back, but had no other attachment, and shelled out without cutting. In appearance it was nodulated and brain-like in colour. It weighed 17 lb. 10 oz., and was twenty-four inches in circumference. The uterus and ovaries, as well as the other organs, were healthy.—Dr. H. SMITH explained that he saw the case when the tumour was quite small; an exploratory incision had been made to see if it could be removed, but he was unable to find any attachments or adhesions.

The Annual Meeting then took place. The list of officers for the ensuing year, recommended by the Council, was adopted by the meeting. The secretaries', auditors', and librarians' reports were then read and adopted. Votes of thanks to the retiring officers having been proposed and carried, the President delivered his annual address.

Reviews and Notices of Books.

Nouveaux Elémens de Physiologie Humaine, comprenant les Principes de la Physiologie Comparée et de la Physiologie Générale. Par H. BEAUNIS, Professeur de Physiologie à la Faculté de Médecine de Nancy. pp. 1140. Avec 282 Figures. Paris: J. B. Baillière et Fils. 1876.

THIS work, like that of Dr. Bennett which we had some time ago occasion to review, aims at giving the student an account, not only of physiology proper, or the functions of the various organs of the body, but the principal facts of physiological chemistry; the description of the different instruments by means of which the more important physiological results of late years have been arrived at; and, lastly, though certainly to a small extent only, histology and comparative anatomy. It is very questionable whether all this can be accomplished in one small volume, and we think the long section devoted to physiological chemistry, amounting to more than 150 pages, might be advantageously replaced by an extension of the chapter on development—a subject which is dismissed with a few observations on the spermatozoa and ova. The reader is referred in a note to the author's Elements of Anatomy, but it is rather unusual to meet with development under this head, and a brief *résumé* of the subject is generally given in all works on physiology. On the other hand, we have rarely met with more lucid and intelligible accounts of all the apparatus required to demonstrate the pressure and rapidity of the circulation of the blood, the movements of respiration, and the mechanism of the functions generally.

The first chapter, in addition to an account of the principal physiological apparatus required for experiment, gives six full-page woodcuts of the anatomy of the frog, including its osteology, myology, angeiology, and neurology, which are useful and accurate.

M. Beaunis has collected no less than fifteen definitions of life, which increase in complexity from the simple and very imperfect one given by Küss, that life is that which neither physics nor chemistry can explain; and of Bichat, that life is the totality of the functions which resist death; and of Béclard, that it is organisation in action; to that of Treviranus, that life consists in the constant uniformity of phenomena, with diversity of external conditions, which led to that of Herbert Spencer, that it consists in the continuous adjustment of internal relations to external relations.

We have read through with some care the sections on Digestion and Respiration. There is nothing particularly new or striking either in the facts adduced or in the mode in which they are placed before the reader; the statements are correct, fairly worked up to recent, though not always to the most recent date, and all theoretical discussions are very properly merely alluded to, or cast into sections in smaller type, which the student is recommended to skip on his first perusal of the book.

A good section is introduced on the action of external media—or, as we might say, of the surroundings—on the organism, in which the effects of temperature, pressure, electricity, &c., are considered; the chapter concluding with an account of the action of different toxic agents, alcohol, woorara, and various alkaloids.

One of the best chapters in the book is that devoted to the consideration of the mechanism of respiration, phonation, and speech. This is instructively given, and the text is illustrated by some original and excellent woodcuts giving the position of the tongue in pronunciation of the vowels and various consonants. M. Beaunis states that climate has a real influence on the production of sounds, and especially of the vowels. The vowel *a*, which requires a large buccal opening, and consequently permits the external air to penetrate deeply into the mouth, is much more frequent in the languages of the South—the Arabic, for example—than in those of the North. In like manner, in the passage from Italy into France the open *a* disappears gradually and is replaced by the *e* mute. The influence of climate is felt also, though less strongly, in the articulation of the consonants.

In the section on the quantity of blood propelled into the aorta at each systole, we observe the amount is estimated at 6½ oz. Is not this far too high?

Upon the whole, the book appears to us to be a good solid introduction to physiology, which may be safely placed in the hands of the student.

The Quarterly Journal of Microscopical Science. No. LXI. January, 1876. Edited by Dr. PAYNE, Prof. LANKESTER, and Mr. ARCHER. London: J. and A. Churchill.

THIS is an excellent number. It contains an important paper, by Dr. G. Thin, on the Structure of Hyaline Cartilage, in which he gives the result of a large number of observations made on cartilage subjected to the action of caustic potash and to nitrate of silver. He shows that stellate and parallel systems of lymph-channels exist, the former corresponding to Recklinghausen's *Säftcanälchen* in the cornea, and the latter to Bowman's corneal tubes. He also finds that cartilage contains layers, or flat sheets, of epithelial cells. He believes he has been able to obtain giant cells from healthy cartilage by simple prolonged

maceration in aqueous humour in a sealed preparation. 2. Mr. Hugh Price, of Magdalen College, Oxford, describes a Polystomatous Condition of the Hydranths of Cordylophora lacustris. 3. Further Observations on a Peach- or Red-coloured Bacterium, by Prof. E. Ray-Lankester—a very careful and elaborate account of Bacterium rubescens, a common Schizomycete, or as Cohn now proposes to call these animals, schizophyte. 4. The Development of Teeth, by Charles S. Tomes, who gives a short *résumé* of the advances that have recently been made in our knowledge of this subject. He considers that the membrana præformativa has no significance in the process. 5. An account of Prof. Haeckel's recent additions to the Gastræa Theory. The Gastræa theory, we may just stop to say, is a view recently advanced by Haeckel to the effect that all animals above the Protozoa pass in the process of development through a series of stages corresponding to the history of the race from the earliest geological periods, one of the results of which is the formation of a sac composed of two layers with an external opening or mouth. In the present paper, he greatly extends and develops this conception, and seeks to show how this simple form undergoes, or rather has undergone, modification in the process of development of the higher classes. 6. Mr. Bevan Lewis describes the various modes of preparing sections of the Cerebral and Cerebellar Cortex for Microscopical Examination; and, lastly, Mr. H. C. Sorby gives a Note on the Evolution of Hæmoglobin. The number is illustrated by no less than ten plates. Mr. Thiselton Dyer, having been appointed Assistant-Director of the Museum at Kew, retires from the editorship.

The Positive Philosophy of Auguste Comte. Freely Translated and Condensed. By HARRIET MARTINEAU. Second Edition. Two Vols., 8vo. London: Trübner and Co. 1875.

System of Positive Polity, or Treatise on Sociology, Instituting the Religion of Humanity. By AUGUSTE COMTE. Vol. I. 8vo, pp. 618. Containing the General Views of Positivism and Introductory Principles. Translated by JOHN HENRY BRIDGES, M.B. Oxon., Inspector of the Local Government Board.—Vol. II. 8vo, pp. 387. Social Statics, or the Abstract Theory of Human Order. Translated by FREDERIC HARRISON, M.A., of Lincoln's-inn. London: Longmans, Green, and Co. 1875.

THE present edition of Miss Martineau's free translation and condensation of Auguste Comte's "Positive Philosophy" will be very welcome to many students. The previous edition has been for some time out of print, and copies of it have been difficult to obtain. Here, at least, and doubtless in its French guise across the Straits, this work will be the text-book of the Positive Philosophy for all ordinary students. Criticism is exhausted in the statement that it received the full approval of Comte himself. The book, indeed, is almost unique of its kind, and it compelled the gratitude of the author, as it still commands the gratitude of the student, for the admirable pruning of the redundancies of the original.

It was, in some senses, a happy thought of the Messrs. Trübner to publish this edition contemporaneously with the appearance of an English translation of the "System of Positive Polity." The one translation may be regarded as the complement of the other. Moreover, to the bibliophilist who may indulge in a copy of the "Polity" it will be an advantage to possess himself of an edition of Miss Martineau's work which will range on the same shelf with it. It is painful to the bibliophilic mind to disperse on different shelves the works of the same author, or to bring them together on the same shelf to the destruction of a decent uniformity in size. Thanks to Messrs. Trübner, it will not be necessary to sunder the translations of the "Philosophy" and the "Polity." In another sense, however, the re-issue of Miss Martineau's work at this time was hardly kind. In view of the publication of an English translation of the "Polity" in four somewhat formidable volumes, each volume the work of a separate translator, Miss Martineau's translation suggests certain considerations not quite favourable to the newer books, at least so far as the uninitiated are concerned. Two other volumes of the translation of the "Polity" have yet to appear: one ("Social Dynamics"), the work of the Professor of History in University College, Mr. E. J. Beesly, M.A., the other the work of Richard Congreve, M.D., and Mr. H. D. Hutton, M.A. Add Dr. Bridges and Mr. Harrison and we have here five graduates of no mean reputation unequal to do for the "Polity" what Miss Martineau did for the "Philosophy." Yet to outsiders it would seem as if the former work would have gained more by judicious condensation than the latter, and Comte's memory and the labour of students been proportionately benefited. It may be assumed that the translators were unwilling thus to meddle with the actual phraseology of a venerated author, and, perhaps, it is as well that a work which aimed at nothing less than perfecting humanity through the agency of a particular method of philosophy should be given without curtailment. The translators of the present instalments, Dr. Bridges and Mr. Harrison, have done their work thoroughly well.

A Biennial Retrospect of Medicine, Surgery, and their Allied Sciences for 1873–4. New Sydenham Society. London. 1875.

THIS publication, almost the only English representative of the class of year-books recording the progress of science which are so admirably maintained in Germany, is, doubtless, one of the most valuable undertakings of the excellent New Sydenham Society. The great impetus given to original research, and the enormous increase in periodical scientific literature, render it impossible for the student to keep up to the level of the ever-advancing line of science, unless by the aid of such a companion as the present work. The subjects here summarised are: Physiology, by Mr. Henry Power; Practical Medicine, by Dr. A. B. Shepherd; Surgery, by Mr. Waren Tay; Ophthalmology, by Mr. R. B. Carter; Midwifery and the Diseases of Women and Children, by Dr. Charles H. Carter; Medical Jurisprudence, Materia Medica and Therapeutics, and Public Health, by Dr. Thomas Stevenson. Of these, Medicine and Surgery take the lion's share, and although we confess we should like to see the introduction of reports on anatomy, we by no means recommend the curtailment of the section on physiology—perhaps the most rapidly advancing science at the present day. In his Report on practical Medicine, Dr. Shepherd appends to his abstracts a long list of references to other articles, the whole forming a most exhaustive summary. Mr. Tay includes Diseases of the Skin within his admirable surgical report. But Diseases of the Ear apparently find no place. Full justice is done to English observers, and the whole volume is creditable to its compilers and to the Society under whose auspices it is published.

Beiträge zur Biologie der Pflanzen herausgegeben. Von Dr. FERDINAND COHN. Heft III. Breslau: Kern's Verlag.

THIS part (the third and final one of the first volume) of Dr. Cohn's "Beiträge" contains an excellent series of researches by Schroeter, Just, Frank Sadebeck, and Cohn himself, on the lower organisms. We this week devote a leader to Dr. Cohn's observations on bacteria, but the others are replete with interesting observations on a very fruitful but hitherto little studied field of biological investigation, and we strongly recommend the journal to our readers.

THE LANCET.

LONDON: SATURDAY, JANUARY 15, 1876.

WE have repeatedly complained that the English Universities give so little practical encouragement to graduation in medicine. Lately, a very interesting statement of the present position of this question has been written by Dr. JOHN EDWARD MORGAN, physician to the Manchester Royal Infirmary. Dr. MORGAN is a Doctor of Medicine of Oxford, and may therefore be supposed to advocate greater facilities for graduating without any personal motive, and without any desire to make graduation so easy as to make it contemptible. Various correspondents have lately written to us on this subject. One of them, "Omega," in THE LANCET of December 11th, wrote with great warmth. He holds three London qualifications, has been twenty years in practice, enjoys an unstained character, and has a happy consciousness of the possession of knowledge which would far surpass that of any youth turned out of a University; yet no degree is within his reach without the condition of residence, which to him would be simply ruin. "Omega" waxed so warm in the description of his case as to accuse the Universities of an iniquitous combination to exact the residence clauses. We do not go so far as this. We believe the Universities to be only like all other institutions that have had great powers and little criticism, and very much their own way—they are rather slow and sleepy. The old Universities of England have certainly very inadequately discharged their duties as institutions with enormous wealth and possibilities of usefulness. They have spent their energies and their resources in teaching classics and casuistry and mathematics. They have been ingenious in limiting their beneficence; in devising conditions of age and circumstances that would minimise their influence. They have acted as if their chief function was to feed the Church with indifferent preachers and partially educated guides of the people. Of course leading men in Church and State have come out of our Universities; but it has been rather in spite of them than as a result of them; and even they have been often limited in their greatness by the impress of a narrow style of education. The Universities have not realised that they exist for the nation, and that their prime business is to allure and assist every class to a higher culture, and especially to put themselves into such a relation towards professional classes as to give them the best chance of becoming scientific in the broadest sense of the word. A conception of a University from which medicine should be practically excluded is worthy only of the middle or of anterior ages, and is an absurdity now, when medicine affects so deeply the interests of society. It is only fair to admit frankly that the older Universities have of late begun to perceive that they are somewhat antiquated and comparatively useless institutions, and that, if they do not succeed in reforming themselves, they will be reformed *ab extra*, and put, despite themselves, into more vital relations with the progress of the nineteenth century. They have made some very creditable attempts to show that they have life in them, But their sympathy with medicine is still very limited, and. if measured by the number of degrees in medicine which they grant, might be considered *nil*. Between them, for the last forty years, according to Dr. MORGAN, they have not dispensed more than five or six degrees annually in medicine—that is, in the science in the cultivation and perfection of which the people are most deeply concerned. Five or six degrees in medicine, and six or eight hundred degrees to Bachelors of Arts! This is a contrast that ought not to continue in Universities in which ACLAND and ROLLESTON and PAGET and HUMPHRY have such merited influence.

It is no answer to those who complain of this state of matters to say that the Scotch and Irish Universities grant medical degrees on more practicable terms. Dr. MORGAN shows that in Scotland 66 per cent., and in Ireland 38 per cent., of the members of the profession are Doctors of Medicine, whereas in England only 28 per cent. are such. It is hard that Englishmen should have to go to Scotland or Ireland for their degrees. That they have to do so is very clear; for, of the 14,101 English practitioners of medicine, only 230 hold the degrees of the older Universities, 479 that of the London University, and 2829 those of the Scotch Universities. Let it not be said, either, in extenuation of this neglect of the Faculty of Medicine by the older Universities, that a degree in Medicine can be obtained without the residence condition from the University of London. It is admitted, however, that the conditions for obtaining the London degree are impracticably difficult to the great majority of men. Moreover, the University of London is only an examining University, not a teaching one. Surely the English Universities ought to be able to do for Englishmen what the Scotch Universities do for the Scotch and the Irish ones for the Irish.

We are dealing here with two grievances: First, the want of a university education on practicable terms for medical students in England, such as would fit them for graduation; secondly, the absence of any provision for granting degrees to practitioners. Dr. MORGAN deals, in his admirable pamphlet, with only the first grievance, which is a very great one, and which puts English youths at considerable disadvantage in comparison with Scotch and Irish students. He is driven to the lamentable conclusion that the English Universities will never be able to meet this want, and that a new university—say, in Manchester, in connexion with Owens College—should be created, which, with the University of Durham, at present without occupation, might meet the need of English youths. We cannot yet believe that our existing Universities are so useless as this conclusion implies. Cannot Cambridge, which has lately shown its willingness to grant certificates of competency in Sanitary Medicine to all comers, from any school or quarter, develop its medical school yet further? We believe it can. Durham is without excuse. And even Oxford might do more than it does. But, meantime, the second grievance—the case of practitioners wanting degrees and willing to submit to a reasonably testing examination—presses very hard for consideration. Theirs is not a mere

sentimental grievance. The possession of a degree, or the non-possession of one, sometimes determines the getting or the losing of a valuable appointment, and has much to do with success in the competition of general practice. It is hard that a man of tried ability and character should have no means of getting a degree, and, wanting it, should be considered inferior to an inferior man. That of St. Andrews is only given to ten men a year, and this for the large sum of £50. The other Scotch Universities demand the condition of residence, which would require a practitioner to give up practice. This grievance is no slight part of the University question in England. We commend it to the Universities, and, failing them, to public men who wish to see these institutions justify their name and their existence.

THE advance of Chemistry during the last twelvemonth, though satisfactory, has not, upon the whole, been brilliant. It is true that an enormous number of new facts in all branches of the science have been brought to light, and much quiet progress has been made in our knowledge of the molecular structure of compounds, and of the influence of physical agents in chemical changes; but very few of the new discoveries possess anything like general interest, and the great majority of them are unintelligible to all but professional chemists. We are sorry to find that our own country figures poorly in the chemical history of the twelvemonth. The Proceedings of the Royal Society does not contain a single paper on pure chemistry; and although the Chemical Society has published forty-seven original papers, nearly all of which are useful contributions to science, few of them are of first-rate importance.

Perhaps the most remarkable chemical event of the year is the alleged discovery of a new metal. M. LECOQ DE BOISBAUDRAN, "between three and four in the evening of August 27th, 1875," found indications of the probable existence of a new element. This new element proved to be a metal apparently analogous in properties to aluminium or zinc. It was first detected by spectrum analysis in zinc blende, and is named *Gallium* by its discoverer. It is only found in very minute quantities. Among other discoveries in inorganic chemistry may be mentioned the elaborate researches of CLEVE on the compounds of the scarce elements, thorium, lanthanum, and didymium. Thorium, it appears, is a tetrad, like tin; the other two are triads. SIDOT has discovered the long-expected carbon monosulphide, a red amorphous solid. WOLCOTT GIBBS has reinvestigated the complex hexatomic compounds of cobalt, many of them exceedingly beautiful. MICHAELIS and SCHUMANN seem to have established the formula, $SO_2.NO_2OH$, for the long-disputed crystals of the sulphuric acid chamber; and ACWORTH has studied the gases evolved during the action of nitric acid on copper, mercury, zinc, iron, and silver. He obtained results very different from those described in the text-books. Thus, when much copper nitrate was present, the gas evolved by the action of nitric acid on copper contained in one case as much as 85 per cent. of nitrous oxide, 10 per cent. of nitrogen, and only 5 per cent. of nitric oxide; with silver no nitrous anhydride was obtained. PEBAL has made fresh experiments on hypochloric acid and euchlorine, establishing the first as ClO_2, and showing once more that the latter is only a mixture of ClO_2 and free chlorine.

In organic chemistry but little has been done that would be likely to interest our readers. The already enormous aromatic series has swollen to still more gigantic dimensions, and the names get longer than ever. The indefatigable Dr. STENHOUSE contributes some discoveries in regard to the action of chlorine and bromine on gallic and pyrogallic acids. BECKETT and WRIGHT have continued their valuable and still unfinished researches on the opium bases, from which we trust in time to learn the constitutional formulæ of those interesting compounds. Then the synthesis will follow almost as a matter of course. WARRINGTON has published a comprehensive monograph on tartaric and citric acids. Little else of importance has been done in England, but the contributions from Germany and France are almost endless. We note, as important examples, the papers of ERLENMEYER and SIGEL on the capryllic derivatives, of SONNENSCHEIN on the mutual conversion of strychnine and brucine, of WALLACH on the derivatives of chloral, and, above all, of KOLBE on the artificial formation of salicylic acid. This last discovery is of great practical importance, as it has proved a commercial success and has placed this highly valuable agent within the reach of our own profession. The synthesis is effected by the action of carbonic acid on sodium phenol (carbolate of soda).

Of recent discoveries in physics, the most important is certainly that of Mr. CROOKES, of repulsion caused by radiation. During the last year the observations of this curious fact have been greatly extended, and continuous rotatory motion obtained from rays of all kinds, even the ultra-violet rays. This is effected by means of an instrument called a *radiometer*, a number of small discs, like wafers, suspended by cross wires on a fine point in a vacuum. Further experiments, still unpublished, have since been made, and Mr. CROOKES's lecture at the Royal Institution, on February 11th, is anticipated with unusual interest.

Among the numerous researches on the spectrum which have appeared we may point to Mr. HUGGINS's observations on COGGIA's comet, and to the valuable and laborious researches of LOCKYER and ROBERTS on the absorption spectra of metallic vapours in which the metals were volatilised by the oxy-hydrogen blowpipe in tubes made of quick-lime, and the beams of the electric lamp passed through the vapours to the spectroscope. J. THOMSEN has added to his admirable researches on thermo-chemistry, VOGEL to his discovery of last year on the effect of colouring matters in promoting the decomposition of silver salts by light, and ANDREWS to his now well-known discovery of the continuity of the liquid and gaseous states. Lastly, GUTHRIE has discovered a new class of compounds, which he calls *cryohydrates*, which are formed by the action of freezing mixtures on saline solutions. They seem to indicate a peculiar kind of equilibrium in the liquid.

Want of space forbids us to dwell on the year's discoveries in physiological chemistry. Reference to these discoveries either has appeared or will appear in these pages. We cannot, however, refrain from mentioning the great re-

searches of Pettenkofer and Voit on the use of the carbohydrates in food; of Weiske on fat and on bone; and of Becquerel on the electric condition of arterial and venous blood. The arterial is always negative to the venous, it appears, which seems to furnish another argument in favour of the theory that the true seat of animal oxidation is within the walls of the bloodvessels.

The Presidents of the three Obstetrical Societies of the kingdom have recently delivered addresses according to custom at the beginning of the year, and they are on this occasion of more than usual interest and importance. Dr. Priestley, the President of the Obstetrical Society of London, took for his subject the debate on Puerperal Fever which the members of the Society and others engaged in during the last session. The debate, opened by Mr. Spencer Wells by propounding a series of questions, lasted for four evenings, and most of the leading obstetricians in England, several from Scotland and elsewhere, took part in it. It was natural to expect that a good deal of theory—some of it purely theory,—a great many facts, and much experience, would in this way be brought to bear on the question in debate—a question concerning which there were abroad views of a somewhat vague and ill-defined character. This uncertainty with regard to the nature of the disease arose from its obscure and varying character—from the very different experience met with in different epidemics, and from the very different causes which gave rise to it at different times and in different places. The result of the debate was that a large mass of matter was brought together without arrangement or order of any kind, which, so long as it remained in this state, would prove of far less use to the majority of the profession than if it were carefully digested and reproduced in a concise and readable form. This the President has done with great care and ability. Taking the questions propounded by Mr. Wells as a basis of arrangement, he proceeded to educe such answers to them as the facts and arguments brought forward in the course of the discussion warranted; and in this way he has given a most valuable *résumé* of the present state of our knowledge with regard to the nature, propagation, and prevention of puerperal fever. A definition of the term "puerperal fever" may be given to suit any theory which may be held as to its nature, cause, &c.; but the term has been used to include a large number of febrile affections of the puerperal period, and it is hardly possible at present to improve on the definition given by Dr. Arthur Farre—namely, "a continued fever, communicable by contagion, occurring in women after childbirth, and often associated with extensive local lesion, especially of the uterine system." This leaves the nature of the disease, as to specificity, an open question; and it is well to do so. Dr. Fordyce Barker contended for a specific puerperal fever; but, with this exception, there was a remarkable unanimity in regarding the disease as non-specific in character, and as forms of blood-poisoning, modified, but essentially the same as those observed in other than puerperal patients. The poison may originate in degeneration and death of the patient's own tissues, such as placenta, blood-clots, &c.—autogenetic; or it may be introduced from an extraneous source—heterogenetic. Amongst the latter are the poisons of zymotic diseases. Many if not all of those may, when introduced into the system of the puerperal woman, give rise to puerperal fever. Experience differs somewhat on this point. Several speakers stated that they had often attended labour cases side by side with cases of scarlet fever, and had never known any evil result from it; while others affirmed that they had seen puerperal women pass through the various stages of scarlet fever without any apparent modification of the disease; and some asserted that they had seen cases in which contact with the poison of scarlet fever or other zymotic disease had been followed by puerperal fever. These statements appear at first contradictory, but in reality they are not so, and he who ignores the last does not give due weight to the dangers attending on the puerperal state. That puerperal fever may be caused by erysipelas, and that the two diseases may be interchangeable, was unanimously held. Whether, however, the disease originated by auto- or by hetero-infection, it was generally maintained that it was communicable by contact, or by the breath or exhalations from the body, though some believe that certain forms are contagious while others are not. The distinction, however, between the contagious and the non-contagious forms (if such there be) cannot be made out, and whenever a case occurs in practice every precaution should be taken to prevent its spread. The means for its prevention are cleanliness, the use of disinfectants, washing out the uterus and vagina if the lochia be offensive, the prevention of communication between the lying-in patient and zymotic diseases, avoidance of post-mortem examinations, and, if necessary, temporary abstention from attendance on midwifery cases. These are some of the points brought forward in the debate; and though it has added little that is new to our knowledge of the diseases which are grouped together under the name "puerperal fever," yet it has served, not only to bring together a large number of facts and much experience, but also to give to our views of the disease a definiteness and a distinctness which they previously wanted.

The address of Dr. Lombe Atthill, delivered before the Dublin Obstetrical Society, and that of Dr. Alexander Simpson on Emmenologia, will be reverted to on an early opportunity.

The medical-women advocates may congratulate each other on the progress and advancement of their cause during the past week. At a meeting of the Council of the Royal College of Surgeons of England, held on Thursday, the 6th inst., a report was received from the legal advisers to the Council, to the effect that that body had no power to withhold its certificates of qualification in Midwifery from women who have complied with the necessary regulations; and this week the Board of Managers of the Queen's Hospital, Birmingham, have decided to admit women to the clinical lectures delivered in the hospital, and to permit them to enjoy all the privileges of male students. It would appear, therefore, that one by one the barriers and obstacles that previously shut women out of the medical profession will be surmounted or swept away; and the day of medical Amazons is not, perhaps, so far distant as we sometimes are apt to imagine.

The position in which the Council of the Royal College of Surgeons find themselves is somewhat anomalous. In December last Mr. CRITCHETT, who had previously exhibited great sympathy for medical women, introduced a motion, at a meeting of the Council, as to the advisability of admitting women to the examination for the certificate of qualification in Midwifery. The matter was referred to the Standing Counsel, who were desired to report on the legal position of the Council. What the opinion of counsel is we have already stated. Here, then, the Council for the present find themselves compelled to receive, or, what is the same thing, are unable to resist, the approaches of female candidates who may take them by storm by means of a side-door that has been inadvertently left open and unguarded. It is not, however, the mere fact that the Council are unable to refuse to admit women to the examination in Midwifery that is to be regretted. It has been established that a person may be placed upon the Medical Register on the strength of the certificate of qualification in Midwifery alone. It follows therefore that, if women can succeed in obtaining this certificate, they may be placed upon the Medical Register, after which they will have little difficulty in engaging in all the departments of general practice; or, if they wish to make their position a little more secure, they may buy or otherwise become possessed of a foreign diploma or degree, and then practise Midwifery or the other branches of Medicine and Surgery, as their fancy may lead them, or the exigencies of their condition may render expedient. The position of the Council of the Royal College of Surgeons is therefore a perplexing one; for, unless they make their regulations more stringent and exacting, they may involuntarily become the means of slipping into the profession a large number of ignorant and ill-trained women, who would trade upon the credulous and the poor. The Council will have to make such changes in their regulations as will make their certificate a guarantee of training, of competence, and of skill.

It must not be forgotten, however, that the certificate in Midwifery is not, according to the charter of 1852, a licence, although persons holding this certificate have been placed on the Medical Register as Licentiates in Midwifery, and have, indeed, been so designated in the Calendar of the Royal College of Surgeons. If women, therefore, receive this certificate, it will not give them any legal qualification to practise except as midwives. Should they venture to practise medicine and surgery, or even the diseases of women and children, they will be unable to recover their charges in a court of law, and will to all intents and purposes be illegal medical practitioners.

We are by no means sorry that the true position of the Council has been thus accidentally disclosed. If women are destined to take their stand in the medical profession, it is of the highest importance that they should be admitted by the agency of a responsible corporation like the Royal College of Surgeons. It is therefore a question, that the Council would do well to consider seriously, whether they can devise some scheme whereby women shall be legitimately admitted to examination for the qualification in Midwifery, but in this subject only. If this can be satisfactorily arranged, there is little doubt that much of the agitation about medical women will speedily subside, and that there will soon be a considerable falling off in the female aspirants to medical practice.

Two memoirs have just appeared from the pen of Dr. FERDINAND COHN, in his *Beiträge zur Biologie der Pflanzen*, which possess much interest: the first dealing with the classification of Bacteria, and the differential characters of these minute organisms, as we must still continue to call them, though the term is scarcely appropriate, so little structure do they present; whilst the second is chiefly occupied with the development of VOLVOX. In the former, he points out the difficulties of defining species in such minute bodies as bacteria, which present so few points of difference under the microscope; and criticises BILLROTH's division of them into micro- meso- and mega-coccus, and micro- meso- and mega-bacteria,—the former including the round, the latter the rod-shaped bodies, and both of which BILLROTH believed were only different forms of one species, to which he gave the name of Coccobacteria septica. COHN seems rather disposed to maintain that bacteria of different forms and of different fermentative activity should be regarded as distinct species till evidence is obtained to the contrary. He quotes BILLROTH's description of Ascococcus, and shows that he has described two forms under that name. In his efforts to obtain evidence of the germs of bacteria in ordinary atmospheric air, COHN satisfied himself that PASTEUR's method of filtering the air through cotton-wool, and then dissolving the wool, was as unserviceable as POUCHET's aeroscope, which consists of a slide smeared with glycerine; and adopted, instead, the plan of transmitting a small quantity of air through a solution capable of supporting and promoting the life and multiplication of bacteria (namely, a 1 per cent. solution of tartrate of ammonia, with other salts in due proportion). After the transit of air for some time, this fluid becomes turbid; flocculi of mycelium appear, which rapidly increase in size, and are soon easily recognisable, even by the naked eye, by the colour of their conidia. Aspergillus and penicillium are amongst the most commonly developed forms, whilst mucor only appeared once. The proportion of germinating plants to the air in these experiments was such that one active spore existed in each ten litres (or about seventeen pints and a half) of air. According to this, a healthy man introduces about 1000 active spores of fungus into his lungs per diem, the majority of which must either be discharged again or have their growth arrested, otherwise the bronchial tubes would soon become choked. The troubling of the fluids in the wash-bottles was in great measure also due to the presence of yeast-cells. But, curiously enough, bacteria did not, as a rule, make their appearance. This COHN attributes, not to an absence of the germs of bacteria in the air, but to the circumstance that, being extremely light and surrounded by a gelatinous envelope, they are not easily retained by water, but are set free again as each bubble that has passed through the water bursts. COHN thinks that spores can only germinate when they have been thoroughly moistened; and this accords with BURDON-SANDERSON's statement that the infection of bodies in a state of putrefaction is effected, not through the agency of the air, but of water. COHN de-

scribes with great minuteness the characters of a peculiar organism to which he has applied the term "ascococcus Billrothii," which possesses some remarkable properties. It consists of extremely minute spherical bacteria, associated together in large numbers to form lobed masses, which are surrounded by a gelatinous, or rather cartilaginous (for it is too tough to break up by compression) envelope. These increase and multiply, and gradually form a creamy scum, possessing a remarkable odour resembling butyric acid. Coincidently with this, the acid reaction of the fluid containing the acid tartrate of ammonia becomes intensely alkaline, and ammonia is liberated. He also describes the characters of various-coloured microscopic organisms—chroococcaceæ—which make their appearance in different animal and vegetable infusions, and one of which—Bacterium rubescens—is fully discussed by MR. E. RAY LANKESTER in the *Quarterly Journal of Microscopical Science* (Jan. 1876). COHN enters also into some details in regard to the genus Beggiatoa, which forms long, thin, and colourless mucous fibres that cover all the rocky bottoms of the Georgian lakes, and which seems to have the power of living in water impregnated with sulphuretted hydrogen, and of decomposing that gas. COHN proposes the name of "schizophytæ" for the whole group, which he divides into "gloegenæ" and "nematogenæ." The former he subdivides into (*a*) those having free cells, or cells divided binarily or quaternarily; (*b*) those having cells inserted into amorphous families of mucus; (*c*) those having their cells inserted into well-defined families of mucus. The latter (nematogenæ) he subdivides into those in which the cell-filaments are unbranched, and those with fibres with false branches.

Annotations.

"Ne quid nimis."

CHEMICAL VAPOURS AND HEALTH.

THE provincial medical officers of health are beginning to show that their minds are deeply interested in their work, and that, not content with the simple labour of performing the bare duties that may be required of them in their respective districts, they are endeavouring, by united and systematic observation, to make themselves masters of those greater problems of sanitary science on the solution of which the improvement of the health of the nation, generally, depends. A quarterly meeting of the North-Western Association of Medical Officers of Health, which was held on the 28th of December last, in the Mayor's parlour at Manchester, betokens, by its proceedings, the advancement that is being made in the direction we have stated. On the occasion in question the medical officer of health for Birkenhead, Mr. F. Vacher, read a very able report on the effects upon human life of the vapours and gases emitted from chemical and other works. The Manchester and Salford Sanitary Association invited the North-Western Association of Medical Officers of Health, some time ago, to co-operate in an inquiry on the above-named subject, and the report to which we refer was the result, the evidence having been collected by Mr. Vacher and his colleagues. The information sought included reports on the effects of gases and vapours on the mortality of the districts in which such gases and vapours are evolved; the forms of disease which seem to be produced or aggravated by this cause; the signs of general ill-health or weakness that could properly be attributed to this pollution of the air; the question whether the atmosphere is specially injurious to new settlers in the district; and the practical legislative suggestions that may be needed to amend any observed evils. Replies to these inquiries were elicited, with more or less of detail, from twenty-six districts. The evidence went to show, on the whole, that the influence of chemical works on the districts surrounding them was not very clearly injurious; while there was a pretty unanimous opinion that workers within chemical manufactories were subjected to influences which acted injuriously on the health. The diseases caused and influenced were chiefly bronchitis and asthma; less frequently, phthisis, pneumonia, and emphysema. There was also some evidence that the gases in certain districts caused loss of appetite, sick headache, diarrhœa, vomiting, and indigestion. On the subject of acclimatisation, the evidence, as far as it went, seemed very undecided. No important suggestion bearing on legislative interference appears to have been given.

The subject which has thus been opened by the medical officers of health is one that can only be fully investigated by the Government of this country. It ought, properly, to form a section of a larger inquiry on the whole subject of Industrial Pathology. In 1854 the Belgian Government appointed a commission of inquiry on this special subject. The report was favourable to the health of those who were residing in the districts where chemical manufactories were established, although it admitted that some emanations from the factories were injurious to vegetation, and that the healths of operatives in manufactories suffered. On this last-named point the statistical facts on mortality and occupation, in Dr. Richardson's table, published in the present number of THE LANCET, have a direct bearing. His table shows that the mortality of workers in chemical and dye and colour manufactories is 24 per cent. above the average mortality, and that while 546 deaths were actually recorded in three years from a population of 29,425 operatives, the number of deaths which, according to the standard rate of mortality, should have occurred was 442. It is probable, therefore, that *within* the factory, at all events, there are definite causes at work which are reducing the value of life in the operatives employed. Information of this kind, though it does not take the place of a Government inquiry, is none the less valuable, and is calculated to lead the supreme Legislature to the consideration of the duties that lie before it. For these reasons we thank Mr. Vacher and his colleagues for having stepped out of their everyday work to perform, voluntarily, an important public service.

THE USE OF ALCOHOL.

IT is not surprising that the extent to which alcohol is employed in our hospitals and infirmaries is occasionally the subject of questioning scrutiny by the lay authorities. There exists a very widespread belief that doctors are, as a rule, prone to the indiscriminate administration of stimulants, and that the amount of alcohol they order is in many cases far beyond the real need. Possibly there has been in the past some justification for the charge. The wave of stimulation which swept, with Dr. Todd's influence, over medical opinion, may here and there have carried the practice to an injurious degree, but we believe that the recoil has left little room for criticism, and that the great bulk of the members of our profession entertain and act upon a very just estimate of the time at which and extent to which alcohol should be given. But the annual consumption of wine and spirits in a hospital in which a large number of acute cases are treated makes a formidable figure in the total expenditure. It is

not, therefore, surprising that the governors of the Newcastle Infirmary, on finding that the annual consumption of alcohol in their wards was at the rate of something like 1000 bottles of wine and 400 bottles of spirits, wished for a careful report on the subject by the Medical Board. This was recently supplied, and its assurance that the employment of alcohol had been strictly regulated by the needs of individual cases was satisfactory to the authorities, although it appears to have been a matter of not unreasonable regret to some that alcohol should be necessary to cure the mischief which alcohol had had so large a share in producing. The Newcastle Infirmary is a large institution, a considerable number of the cases treated are of great severity, and the amount of stimulants we have mentioned corresponds only to an average of something like two-thirds of a bottle of wine and one quarter of a bottle of spirit for each patient during the whole of his stay in the hospital; certainly a very moderate amount.

A still more simple justification was available for Dr. Roe, of Ellesmere, in reply to a foolish circular on the needlessness of stimulants in acute disease, sent to him by the guardians of the parish. The total cost of stimulants for the sick poor under his care had amounted to only 2¼d. per head per week. In a very sensible letter he points out the fallacies on which the hasty conclusion as to the needlessness of stimulants had been based, and urges, with great point, that the judicious use of alcohol, by lessening the period of convalescence, effects a direct saving to the guardians of the poor, which must often far more than counterbalance the prime cost of the stimulants. We are glad to see that the letter carried conviction to the guardians to whom it was addressed.

UNQUALIFIED PRACTITIONERS IN SOUTH LONDON.

THE death-register affords the means of estimating pretty accurately the number of deceased persons who are attended in their last illness by unqualified practitioners in different localities. The Registrar-General, in his last Weekly Return, publishes some useful figures, showing the result of an inquiry as to the number of deaths registered in London during the five weeks ending the 1st inst., the causes of which were certified by registered medical practitioners and by coroners, and of those uncertified. The deaths registered in London during these five weeks were 8703; the causes of 7889, or 90·7 per cent., of the deaths were certified by registered practitioners; of 654, or 7·5 per cent., by coroners; and of 160, or 1·8 per cent., were uncertified. The percentage of uncertified deaths in March, 1871, when the last similar inquiry was made, was 1·6 per cent., rather less than at present. The Registrar-General states that in by far the largest proportion of these uncertified cases the deceased persons (principally children) were attended by practitioners both unregistered and unqualified. In a few cases the certificates produced to the registrar are issued by qualified but unregistered practitioners, and in these cases the cause of death, in accordance with the Births and Deaths Registration Act, 1874, is not entered as certified, and the name of the practitioner does not appear in the death register. The proportion of uncertified deaths in different parts of London may be assumed to bear a certain relation to the number of unqualified practitioners in different localities, and we are told that during the five weeks under notice the percentage of uncertified deaths was 0·9 in the East, 1·0 in the North, 1·3 in the West, 1·7 in the Central, and so high as 3·5 in the South groups of registration districts. With reference to the contrast between East London and South London, it is pointed out that whereas the proportion of inquest cases was 10·1 per cent. in East London, it was only 5·8 per cent. in South London. The Registrar-General remarks: "There appears to be no satisfactory reason why the causes of nearly four times as many deaths should be uncertified in South London as in East London, and little more than half the proportion of inquests held." Nothing short of an Act rendering it obligatory to hold an inquest in the case of every death where the certificate of a registered practitioner is not forthcoming would secure a satisfactory return of the causes of death for the purpose of the death-register, and put a sufficient check upon irregular and unqualified practitioners. In the meantime, however, much might be effected in this direction by a few inquests upon deceased children who have been attended by unqualified practitioners in Southwark, Bermondsey, Rotherhithe, and Deptford. Those who have had the opportunity of seeing the so-called certificates of the cause of death issued by some of these practitioners, and the gross ignorance they display, must be convinced that the suppression of their irregular practice is called for on still higher grounds than the improvement of the death-register as the basis of sanitary and medical statistics.

SIR JOHN LUBBOCK ON PUBLIC SCHOOL EDUCATION.

IN the current number of the *Contemporary Review*, Sir John Lubbock calls attention to the recent report of the Duke of Devonshire's Commission appointed to inquire into the state of scientific instruction in this country. Sir John Lubbock agrees in the conclusions arrived at by the Commission, "That the present state of scientific instruction in our schools is extremely unsatisfactory. That the omission from a liberal education of a great branch of intellectual culture is of itself a matter of serious regret, and considering the increasing importance of science to the national interests of the country, we cannot but regard its almost total exclusion from the training of the upper and middle classes as little less than a national misfortune." It appears from the returns published by the Commissioners from more than 120 of the larger endowed schools, that in more than half of them no science whatever is taught, only 13 have laboratories, and only 18 possess any scientific apparatus. We agree with Sir John Lubbock, that a system of education "which leaves one side of our nature entirely neglected" is unsatisfactory and incomplete. Sir John Lubbock very properly points out how unfitted the education at present pursued in our large schools is for the practical requirements of the age. After leaving school the majority of boys are desirous to seek the means of earning an honest livelihood, yet they have had no special training to qualify them for posts which might be open to them. As Sir John Lubbock points out, there are banks, mines, gas companies, manufactories, and railways throughout the world, owned by English companies, who would gladly employ English youths, but unfortunately in too many instances the young men can speak no foreign language, and have no knowledge of physics or chemistry. Admitting, therefore, the necessity for an extension in the teaching of modern languages and science in our schools, it remains to be considered in what manner the extension is to be effected. Two alternatives suggest themselves—either to increase the hours of study, or to take something from the time allotted to other studies. The former alternative we can hardly suppose would ever be seriously entertained. The hours of work at our public schools, according to Sir John Lubbock, average thirty-six a week, a result similar to that arrived at by ourselves in recent inquiries. This amount we have shown is as much as growing boys can reasonably bear, and when that amount is passed the evil

effects of overwork begin to be felt; therefore, any increase of pressure in this direction ought at once to be discouraged. The other alternative is the general adoption of the "bifurcation" system, or, in other words, the division of the school into a "classical and modern side." This arrangement has been adopted at a few of the large schools, and at Cheltenham, where it has been tried to its fullest extent, it has been found to work admirably. The question naturally arises at what age this "bifurcation" is best effected. Sir John Lubbock is disposed to think that, except in certain cases (as, for instance, preparation for the navy), it should not commence until boys are sixteen or seventeen. With all deference to so high an opinion, we venture to think separation at this age would be rather too late in school life to be of much avail, and we would suggest thirteen or fourteen as the most suitable age. The ordinary classical training, with history, geography, and French or German grammar, might be employed for all during the earlier period of school life; at fourteen, however, a fair estimate of the boy's intellectual capacity can be made, and some idea formed as to aptitude for special studies and pursuits, and the important decision as to the future career most advantageously determined. That decision once made, it is only waste of time to continue studies which afterwards are to have no use in the practical work of life. We have to thank Sir John Lubbock for bringing this important subject before the public, and we hope that the attention thus drawn to it will be the means of improving and extending national education, and of affording the means to many of obtaining useful and valuable appointments early in life, without having to undergo the ordeal of a second training and the expenses attendant on it.

PHYSICIANS' PRESCRIPTIONS AND DISPENSING CHEMISTS.

THE report recently issued by Mr. Allen, the borough analyst at Sheffield, contains some startling revelations respecting the carelessness or dishonesty practised by some of the druggists in that town in making-up prescriptions. Some anxiety had, it appears, long existed as to the care and accuracy with which the prescriptions written by the local medical practitioners were dispensed. To set the matter at rest, the inspectors of the health department presented to certain local druggists some prescriptions which were so arranged that each should include a full dose of some expensive remedy capable of ready and accurate quantitative estimation in a mixture. Three samples, in which 120 grains of iodide of potassium were ordered, were found to contain 122, 120, and 76 grains respectively. Of three samples which should have contained 16 grains of quinine, one contained only 9¼ grains; and another sample which should have contained 40 grains of quinine, contained only 30 grains. It is scarcely necessary to point out the gravity of this careless or dishonest action, but in the interests of medical practice we trust that a sharp look-out will be kept on some of those druggists who undertake to accurately dispense physicians' prescriptions. We do not for one moment believe that these fraudulent practices are common, and we are sure that the better class of druggists would welcome the adoption of any measures that would effectually check the dishonesty of some of their disreputable *confrères*. Although the strictest confidence as a rule exists, at all events in the metropolis, between the prescribers and the druggists who are in the habit of making up their prescriptions, there is a suspicion that the prescriptions are sometimes not faithfully dispensed. It is incumbent on those pharmaceutical chemists who desire to preserve the honour of their calling, and to obtain the right to dispense medicines for medical practitioners, to discountenance their fraudulent brethren, and bring their evil practices under the notice of the Council of the Pharmaceutical Society.

It is, of course, wrong to tamper with or "devil" any prescription, but where iodide of potassium or quinine, and a few other drugs whose actions are so thoroughly understood, are concerned, it is almost criminal. It may appear a strong statement, but there are cases in which a patient's life may depend on the quantity of iodide of potassium that is taken, and almost as much may be said of some cases in which quinine is ordered. Curiously enough, it is generally in those instances in which large doses of these remedies are ordered that it is of the greatest importance that the full dose should be administered. Although the Health Committee of Sheffield have decided not to prosecute on this investigation of Mr. Allen, their inquiry has called attention to a serious and important evil, which it is in the power of the health inspectors to attack and eradicate.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

ON Wednesday last a "new wing" of the National Hospital for the Paralysed and Epileptic was formally opened. The progress of this, one of the best and most useful of our special hospitals, will always be watched with interest by the profession, but the new addition to its resources of relief has a special character, which gives it more than ordinary importance. It is an attempt to provide the means of special treatment for those who, while unable to pay for the requisite medical attention at their own homes, are yet of a better class than those who receive the gratuitous relief of the hospital. It is intended that the patients in the new department should contribute something towards the expenses of their maintenance, but the institution "will be at the same time a *charity*, not a self-supporting boarding-house," and we are assured that no person will, under any pretence, be admitted who is able to meet the *ordinary* expenses of medical treatment in her own home. The class for whom it is specially designed is the large class of governesses, poor gentlewomen, daughters of professional men in reduced circumstances, &c. In the new institution all the painful associations connected with the large general hospitals will be avoided, and the hospital life divested, as far as possible, of its wearisome monotony, by the provision of cheerful rooms, regulated occupation, and such "home comforts" as the exigencies of the mode of life permits. The payments made by the patients are to be on such a scale that they will only provide for a portion of the expenses incurred in their behalf. The wing is intended as a memorial to the late Miss Chandler, whose efforts in the cause of the charity (with those of her brother, Mr. E. H. Chandler) have contributed so largely to its successful establishment and operation.

This institution is thus an inauguration in this country of a system which has already obtained the sanction of success in other countries, as it has long, here and elsewhere, had the justification of real necessity. There can be no doubt that there is a real need for the means of treatment, in a well-ordered institution, of cases of nervous disease in those of the lower middle classes who cannot afford to pay for the treatment they need, and yet cannot endure the painful associations, physical and moral, of the relief afforded gratuitously by our general or special hospitals. A large number of cases of nerve disease in this class cannot be treated with success at the homes of the patients. It is precisely among these persons that the diseases are so common which can only be successfully dealt with by removal from the mistaken sympathy of friends into the firmer and really kinder discipline of an institution.

No doubt great care will be needed that the lines laid

down for the limitation of patients are not overstepped. Great as are the difficulties attending the elimination from gratuitous relief of those persons who are unfit recipients, the danger will be still greater that those who can pay a doctor will find their way into the new branch. We do not doubt that with due and vigorous attention, the difficulty may be overcome, but the successful execution of the plan will require unremitting watchfulness. We would suggest that a rule be laid down, that, except in the case of patients recommended by the physicians to the hospital, no case should be admitted except on a medical certificate of fitness, physical and pecuniary. It may be that a private letter from a medical man to the secretary would be even more effectual than an open certificate. With some such system there need, we believe, be no danger that the pecuniary interests of our profession would in any degree suffer by this or any similar institution.

We regret that the privileges of the new branch are to be confined to one sex. Men of the class indicated need such help almost, if not quite, as much as women. We hope that the restriction at present contemplated is temporary only and determined by the, in some measure, experimental character of the plan; and that before long its success may justify its extension on a wider basis.

THE PRINCE OF WALES'S TOUR.

OUR latest intelligence regarding the Prince of Wales's tour is from Madras, and dated the 16th ult. The prevalence of epidemic cholera in Southern India made a change of programme imperative. We perceive that there has been a good deal of discussion as to the necessity or expediency even of this, and we fully anticipate that what is usual in like cases took place on this occasion—viz., that those who were without responsibility were the foremost to proffer advice, and to represent that the Prince would incur absolutely no risk from following out his original programme. Dr. Fayrer evidently thought otherwise, and we feel confident that his judgment will be fully ratified by the opinion of the profession in this country. Unfortunately it has proved what is commonly called a cholera year in India. Be the cause of that disease what it may, it had been indisputably invading all Southern India. What is expressed by a cholera year may be best explained by saying that the deaths from cholera in India in 1875 were estimated at 52,000, against 600 of the previous year. Of course it may be urged, and indeed has been urged, that the risk to a European would have been very small, such as might well have been encountered under the circumstances; but to have allowed His Royal Highness and suite to be exposed to this morbific influence would have been, in our humble opinion, quite unwarrantable, and therefore reprehensible, all foolish statements by irresponsible persons to the contrary notwithstanding.

To return, however, after this digression, to the Prince's tour. Instead of going direct to Beypore, and landing there to proceed to St. Michael's Valley in the Annamally Hills, where the Prince was much pressed to go to shoot bison, elephants, ilex, &c., he went for a week to Baroda, which was quite healthy, then returned to Bombay and steamed in the *Serapis* to Ceylon, merely touching at Goa and Beypore, still in the faint hope of getting to the Annamallys; cholera, however, prevailing at so many stations, the Prince went on to Ceylon, and visited Colombo and Kandy, and had some elephant-shooting in the jungle. The rains were heavy, and the tropical heat intense, and most suggestive of fever and dysentery. Happily there was no sickness, except a few sore-throats. At Colombo the Prince determined to see Madras, and to go by rail from Tuticorin through Madura and Trichinopoly. As both these places and the line of country lay in the area recently, if not then actually, affected by cholera, they passed through as rapidly as possible, and reached Madras, all being well. It was intended to remain at Madras until the 18th, and to reach Calcutta by the 23rd December. Since the Prince arrived at Bombay the thermometer has seldom been less than 80°, often 84°; the atmosphere, more or less loaded with vapour, being enervating and relaxing to a degree. The Prince has, however stood the climate admirably.

FURTHER EXTENSION OF THE WEEKLY BILLS OF MORTALITY.

THE Registrar-General's first Weekly Return for 1876, relating to the seven days ending the 8th inst., embraces a still larger area than did the returns for 1875. It appears that both Brighton and Plymouth have been added to the list of large English towns of which weekly information is published. This addition, we are informed, has been made in deference to requests made to the Registrar-General by the municipal authorities of those two South-coast towns. The population of the municipal borough of Brighton is estimated to the middle of this year at 100,632, and that of Plymouth at 72,230 persons. On the ground of its population alone Brighton has an undoubted claim to appear in this list of large English towns; indeed, the above number considerably understates the population of Brighton proper, as Hove does not at present form part of the municipal borough, and the Registrar-General almost invariably deals with municipal boundaries because they correspond with the areas of sanitary districts. Plymouth, the other newly-added town, although its population (exclusive of that of Devonport, which constitutes a separate borough) is smaller than that of any other town on the list, has but few less inhabitants than Wolverhampton, which has held a place among these towns for several years. Their anxiety for the official publication of their sanitary statistics does credit to the sanitary authorities of Brighton and Plymouth, and, as far as the figures for a single week may be accepted as evidence, the health of both towns appears to be now satisfactory. We entirely agree with the Registrar-General, who, in explanation of his consent to add these two towns to his list, says:—"The sanitary condition of Brighton, as the most popular of holiday and health resorts, and of Plymouth, as an important port and the site of one of Her Majesty's dockyards, is of far more than local interest."

PROFESSOR BILLROTH AND THE VIENNA STUDENTS.

WE mentioned recently the agitation which has been excited in Vienna by the publication of Prof. Billroth's book "On the Learning and Teaching of Medicine in the Universities of the German Nation." Some passages in the work gave rise to something little short of a riot at the Professor's opening lecture, the Jewish students having felt greatly aggrieved by the tone of the work, whilst others supported Billroth. The great repute in which Billroth is held, both in this country and abroad, led us to hope that the excitement and irritation were founded on a misconception of the real import of some passages in the work, and that on examination they would prove to be groundless. But on reading the book we are not in the least surprised at the feeling which has been excited, and some account of it may not be out of place.

The work is divided into five sections, each of which treats of some of the branches of the important subject of the best method of medical education. In the first part an historical sketch is given of the rise and progress of the various German universities, and of the medical faculties

in them. The second discusses the arrangements at present in existence for the teaching of medical science, and of the natural sciences ancillary to medicine, on which great stress is laid; and the various methods of clinical teaching. The third section, under the title of "The Student and the Future Doctor," treats of the necessity for preliminary education, and of the arrangement of examinations, freedom of education, and kindred subjects. The fourth is mainly occupied with the subject of the incorporated professorial bodies, their rights and duties; and the fifth with the relation of the faculties of medicine and natural science to the universities. Finally, in an appendix, a good deal of valuable information is given with regard to the condition of medical teaching, and the arrangements for examinations for licences to practise in other countries. This outline will serve to show how wide is the field of discussion opened, and how many important questions are brought under review. And it is only just to Prof. Billroth to say that a large amount of extremely valuable information is collected together, and many important suggestions and criticisms are made on the modes of teaching and of examinations. But it must be added that there is also a great deal in the book which can scarcely be considered necessary to the discussion of the subject. Of the something more than 500 pages of which the work consists, a large portion is taken up with the author's views on various subjects, and by the most unsparing criticism, couched often in the most uncompromising and sarcastic language, of everybody and everything with which he does not happen to agree. Indeed, from the style of the book, one would almost imagine that Billroth, like Teufelsdrockh, had been constituted "Professor of Things in General," so varied are the subjects, and so sweeping and dogmatic his assertions.

The passages which have given rise to most offence are those in which he complains of the number of poor Jewish students in Vienna. After speaking of the crowd of students in Vienna (the average number being over 1300), and the inconveniences occasioned by it, he goes on to discuss some of the causes. A part of the evil is, he says, due to the fact that a great number of poor Jew boys, especially from Hungary and Galicia, come to Vienna with the insane idea that they can study medicine, and at the same time earn their living by teaching, hawking matches, and as post and telegraph servants. They are, for the most part, highly unqualified to study medicine, and are, moreover, hindered by their want of means and the necessity for earning their living; and that, in fact, it is only their idleness, or rather that of their parents, which leads them to come. Many of them are so stupid that they could never do anything if they worked themselves to death. "Such sticks with straw heads, with dim, half-blind eyes, hands like lead, a brain like mud, with a dictionary knowledge, and a striking know-nothingness, such are found amongst these poor medical students in considerable number; they quake if one speaks to them in an examination, and entirely lose all their little senses if one looks at them severely." And so on in the same style their domestic affairs are discussed. We are not astonished that such remarks, even if well deserved, should have given rise to some ill-feeling amongst the Jewish students, of whom there are a great number in Vienna. Had they been all that Prof. Billroth describes them, it would scarcely have been wise to attack them in such a direct and pointed manner unless there were some object to be gained by so doing; and it is not easy to see what is to be gained by the attack.

There are many other passages in the book which will be equally offensive to many. He attacks in no measured language the association of the theological element with medical schools and universities, and declares himself a believer in Strauss's doctrines. Altogether, the work is one which will do little but make enemies.

Some of the comments on foreign methods of teaching are very amusing, and to some extent deserved, though all are tinged with a similar strain of censure. Nor will all the statements be generally accepted as true. Speaking of England, he says that the number of lectures is few, and the subjects are never treated exhaustively. Every teacher speaks only of what seems important to himself or interests him at the moment. Clinical instruction is extremely defective, and there is scarcely ever anything said by the bedside or at operations. This will hardly be accepted as generally correct. The characteristics of French clinical teaching are very closely hit off, but the picture, though very amusing, is, it need scarcely be said, very incomplete and onesided. On the whole, the book will add but little to Billroth's reputation, and it is to be regretted that some friend did not suggest erasure of the more offensive passages before its publication.

THE PHYSIOLOGICAL ACTION OF VANADIUM.

AN interesting account of some experiments with this rare metal, made by Mr. John Priestley Platt, physiological scholar at the Owens College, Manchester, was read at a recent meeting of the Royal Society. Vanadium is nearly allied chemically to phosphorus and arsenic, but it seems to differ in many points from both of these substances in physiological action. Dilute solutions of sodium vanadate were found best suited for experimental purposes, and were injected into the veins, alimentary canal, and subcutaneously. However introduced, vanadium was found to be an active poison. In fatal doses the most noteworthy symptoms were paralysis of motion, local or general convulsions, rapidly supervening drowsiness, congestion of the alimentary mucous membrane, depression of temperature, intermittent respiration, and feebleness of pulse. The heart preserved its irritability throughout, and there was no impairment of consciousness or of sensibility to pain. With regard to special functions, Mr. Priestley arrived at the following conclusions:—1. That sodium vanadate acts both on the vaso-motor centre and on the intra-cardiac nervous mechanism, producing diminution of blood-pressure, disappearance of respiration-curves, feebleness, irregularity, and intermittency of the pulse. 2. That it acts on the respiratory nervous centres, causing a stimulation and then a depression of the respiratory movements, which sometimes become intermittent. 3. That it has no effect on nerve-trunks or their peripheral terminations, but exerts its influence on the central system of the spinal cord. 4. That it has no direct action on muscle.

THE RESULTS OF DOMESTIC FILTRATION ON THE LONDON WATER-SUPPLY.

DR. FRANKLAND, in furnishing to the Local Government Board his report upon a chemical examination of the water supplied to London during December, states that all the companies delivered efficiently filtered water, except the Grand Junction Company, whose water was "slightly turbid and contained moving organisms." As an illustration of the improvement of Thames water effected by domestic filtration, Dr. Frankland publishes in his table the results of an analysis of a sample of this "slightly turbid" Grand Junction water after filtration through spongy iron and animal charcoal. All traces of turbidity disappeared after filtration, the amount of total solid impurity was reduced from 32 to 20 parts per 100,000, the degree of hardness was diminished from 23 to 16, and more than three-fourths of the organic matter was abstracted from the water. It ap-

pears from the accompanying analytical table that a considerable proportion of the organic impurity of the water is, by this method of filtration, converted into ammonia. In the report now under notice Dr. Frankland again calls attention to one of the objections to which a river-water supply is always open: it is tepid in summer, and intensely cold in winter. We are told that the temperature of the river water delivered in London on December 7th was only 3° Fahr. above freezing point, whereas that of the water supplied by the Kent Company from deep wells in the chalk was 19° higher, or 54·9° Fahr. With all our increased knowledge as to the abominations of river water and the vast superiority of deep well water, we do not, however, appear to have any immediate prospect of a change in the source of our London water-supply.

DIFFICULTIES ABOUT DRAINS.

HOUSEHOLDERS, amateur sanitarians, and many varieties of educated persons are continually writing to *The Times* and other daily journals on the evils that result from the present unfortunate architectural system, as adopted in at least three-fourths of our houses, with respect to the arrangements of the drains. An anxious paterfamilias gives a long-winded story about smells, typhoid, diarrhœa, and other discomforts; another well-to-do but unhappy tenant of a palatial though odoriferous mansion follows suit. All—if they act sensibly—have their drains examined, and if they do so, all, without exception, find an outlet for sewer-gas or a cesspool made by leakage of drain-pipes under the floor of the kitchen, scullery, or some other part of the basement. As a matter of fact, most of our difficulties about drains are caused by the circumstance that, in London and other large towns, the main sewers are built under the main roads and streets, the houses on either side must drain into them, and so the house drain-pipe must perforce be carried at right angles under the basement of each building. *Hinc illæ lachrymæ;* and hence, too, those filthy irruptions of sewer-gas, and consequent outbreaks of typhoid, diarrhœa, and other kindred maladies. Main drains should be geographically constructed so that they can be reached by the house outfall pipes from behind, or should be very securely laid in concrete, so that no escape or reflux of gas can possibly take place under the building; and ventilating shafts should be connected with the transverse main sewer of every house both in front and behind. A vast number of houses still exist in London in which these very ordinary sanitary precautions are entirely disregarded, and a house-to-house visitation of our smartest quarters in the West and South-west districts by a competent sanitary architect would reveal a state of things very much tending, in its practical results, to precipitate systematic legislation about preventable diseases.

ENTERIC FEVER ON BOARD H.M.S. "SULTAN."

H.M.S. *Sultan* has, we hear, received orders to return from Gibraltar, where the ship is at present stationed, to Devonport, in consequence of the outbreak of enteric fever that has occurred on board. We learn that cases of this disease first made their appearance on board shortly after leaving England for the Tagus, and she was sent on from there to Gibraltar in order that the sick might be received into hospital, with the idea that by isolation the progress of the disease might be arrested. Fresh cases, however, occurring, it was determined to order the ship home, so that a thorough investigation into the causes leading to the outbreak might be instituted. It will be interesting to learn by what channels the specifically infected excreta of typhoid patients, when the disease occurs on board ship, find their way to the water-supply.

DR. HARDWICKE AND THE LATE MR. ACTON.

THE following communication has been received by Mr. William Acton from the Home Office in answer to the statement which he felt it incumbent upon him to make in reference to the unnecessary inquest held on his late father by the Coroner for Central Middlesex.

Whitehall, 7th January, 1876.

SIR,—I am directed to acquaint you, in reference to your letter of the 10th ult., that after receiving a statement from the Coroner respecting the circumstances under which he held an inquest in the case of your late father, Mr. W. J. Acton, Mr. Secretary Cross has caused a letter to be addressed to Dr. Hardwicke, of which a copy is enclosed for your information.—I am, Sir, your obedient servant,

William Acton, Esq., 17, Harley-street. A. F. O. LIDDELL.

[ENCLOSURE.]

Whitehall, 7th January, 1876.

SIR,—After careful consideration of your letter of the 29th ult., I am directed to state that, while admitting that you were probably right in ordering an inquest in the case of the late Mr. Acton in the first instance, Mr. Secretary Cross cannot think that your discretion was wisely exercised in going on with it after seeing Dr. Murchison's certificate, who, it appeared, had attended the deceased for weak heart as late as October, and who stated in his certificate that "William John Acton, aged sixty-two last birthday, repeatedly consulted me during his lifetime for symptoms of weak heart, and that I last saw him in October, and that he died on December 7th, at 17, Harley-street, and that the cause of his death was fatty degeneration of the heart, confirmed by post-mortem examination." Mr. Cross agrees entirely that no distinction between rich and poor should be made in these cases, but he considers that a Coroner, in the exercise of his discretion as to whether an inquest is necessary or not, should weigh each case with most careful discrimination, and he cannot refrain from expressing his regret that you felt it to be your duty to proceed with the inquest in this case, although he has no reason—any more than the jury had—to doubt your *bona fides* in so doing.

I am, Sir, your obedient servant,

(Signed) A. F. O. LIDDELL.

Dr. Hardwicke, Coroner for Central Middlesex.

THE OBSTETRICAL SOCIETY.

THE Obstetrical Society of London has determined to appoint a committee to watch the proposal to render women eligible to the licence in Midwifery at the Royal College of Surgeons, now under consideration by the Council of the College. At the next meeting of the Society, on the first Wednesday in February, the uterus of Harriet Lane will be exhibited, and a discussion thereon will ensue. We understand that the Society has invited most of the lecturers on Forensic Medicine at the metropolitan hospital schools to attend the discussion. The Society has made arrangements, within the last day or two, to give a *conversazione* at the Royal College of Physicians in May next, on which occasion a large collection of obstetric instruments and appliances will be exhibited.

DEATH OF VISCOUNT AMBERLEY.

IT is lamentable to notice the death of Viscount Amberley, the eldest son of the veteran Earl Russell, at the early age of thirty-three, and with great prospects and responsibilities before him, not the least of which was to maintain the fame of his name. According to *The Times*, his death was the result of a slight cold, caught five days before his death, going on to bronchitis. We cannot help again reverting to the deadliness of cold. When medical men do so, they are generally met with the answer, "Yes, to the very old and very young it is so." The death of Lord Amberley in his prime may teach the lesson that the diseases produced by cold do not attack only those in the extremes of life. One great duty of people at this season is to protect them-

selves and others from the cold which insensibly, but very steadily, works in a devitalising way. We are so occupied now with drain poisons, foul air, and defective water-supply, that we are apt to forget that there is in the mere absence of heat in the air a great danger. Lord Amberley's death now, as those of Kingsley and Arthur Helps last year, too impressively reminds us of the fact.

DANGERS OF RAILWAY PLATFORMS.

THERE is constant danger of accident on some of our railway platforms. At Cannon-street Station the other day we watched the arrival of one train and the almost simultaneous arrival and departure of another on opposite sides of the same platform, and were struck with the utter recklessness of the arrangement. The platform was exceedingly narrow, the train which arrived first discharged passengers enough to crowd it, and this crowd was met by another crowd rushing to catch the expected train for Charing-cross on the other side. The said train dashed in a minute afterwards, and it was difficult to repress a shudder as the open doors swept along, close to the moving and jostling mass. It seemed a mere accident that some one was not hurled under the wheels. We were eye-witnesses not long ago of just such a disaster at one of the London stations. A crowded platform; a sudden disappearance; fearful cries and groans for a minute or two, and then a silent and bleeding mass carried off to the nearest hospital. Is it no one's business to look after the public safety in such matters as these?

SIR ANTHONY DE ROTHSCHILD.

MANY of our readers will be interested in learning the particulars of the long illness which at length deprived a wide circle of friends of one so universally regarded for his kindness and hospitality as was Sir Anthony de Rothschild. Sir Anthony's fatal malady was prolonged over many months. His medical attendants from the first were convinced that no more could be done than to meet the smaller and naturally concomitant difficulties of the case as they arose, the disease itself being beyond treatment. This was a large medullary growth springing from the pelvis, which by pressure on the adjacent parts gradually exhausted the strength, and finally proved fatal by compressing the ureters, and so leading to uræmia.

SANITARY NOTES.

MR. EDWARD M. MOORE, medical officer of health to the Twickenham and Chiswick districts, advocates in a local journal the establishment of a law, or clause in the Public Health Act, enforcing a rule to the effect that all private practitioners, as well as all householders, shall give immediate notice to the district medical officer of health of the existence of any contagious or infectious disease. Mr. Benjamin Clarke has also been lately ventilating similar views in connexion with the prevention of epidemics. We may remind both these sanitarians, as well as our readers, that this system has for some time existed in Holland. Notice of any infectious case is sent to the burgomaster, who reports it immediately to the sanitary physician. The house is at once, so to speak, quarantined—i.e., a distinguishing card or mark is placed upon it—so that the public at once know the condition of things. The plan is said to work exceedingly well, but we doubt if England is as yet ripe for this, or Mr. Clarke's "sentry" system.

We are glad to find in the *Nautical Magazine* for the current month a very good article, reviewing the operation of the Contagious Diseases Acts, and repeating in detail the arguments that we have often used in favour of their extension to all seaports in the kingdom. It appears that the condition of prostitutes in the lower quarters of Liverpool, Hull, Bristol, and other outports, is even worse than in London, and we are reminded of a statement made by the surgeon of H.M.S. *Audacious*, stationed at Hull in 1872, to the effect that out of an average force of 416 men, there were in the year 125 cases of the worst forms of venereal disease. It is eminently necessary that nautical publications should discuss, and deal decisively with, this very unsavoury subject. The proposed extension of these Acts would exercise an influence over the future condition of our marine as important as the aid that could be given by training-ships, or the medical examination of seamen.

WILLS AND BEQUESTS.

THE *Illustrated London News* published last week under this heading, particulars as to the will of the late Mr. Wynn Ellis. This gentleman, who left a very valuable estate, including a most admirable collection of pictures, has bequeathed sums of money to a large proportion of our hospitals and charitable institutions in London, which sums amount altogether to no less than £125,200 free of legacy duty. The Children's, London, Royal Free, Moorfields and Westminster Ophthalmic, Metropolitan Free, North London and Brompton, Middlesex, King's College, and Male and Female Lock Hospitals, are all included in the list, as well as many other miscellaneous charities, all or most of which are doing a vast amount of good and useful work. It is perhaps invidious to criticise, when so much munificent liberality is displayed; but in this, as in some other instances, money has been left to some few institutions that have at present enough and to spare.

THE SPINAL GANGLIA.

M. RANVIER has been investigating the histology of the ganglia in the posterior roots of the spinal nerves. These ganglia contain cells to which nerve-fibres pass and from which nerve-fibres proceed. It has been supposed that the same fibres coming from the cord traversed the cells, and at their exit from the ganglion were united to the fibres of the nerve-root, and passed with them to the periphery of the organism. But, according to M. Ranvier, this is not so. The filaments which come from the cord return to it after having become connected with (*touché*) the ganglion cells. Those which pass on to the nerve arise from these cells. Thus, according to him, the posterior root has two origins—one from the cord, and the other from the ganglia.

ANATOMY AND PHYSIOLOGY AT THE ROYAL COLLEGE OF SURGEONS.

WE are glad to learn that the Board of Examiners in Anatomy and Physiology at the Royal College of Surgeons of England have decided to extend the time allotted to the examination in physiology at the primary examination for the membership. The written examination will for the present remain as heretofore, but the *viva voce* examination will be extended from twenty minutes to half an hour, the first ten minutes of which will be devoted to physiology exclusively. The system of marking will also be altered, so that numbers will be substituted for the well-known "Good," "Moderate," and "Bad."

THE PLAGUE.

WE regret to announce the rumoured reappearance of plague in Mesopotamia. The recurring outbreaks of this disease in that country cannot be regarded without some degree of uneasiness. The locality of the rumoured reappearance this year is said to be to the north of the places where the malady showed itself in 1867, 1873, 1874, and

1875, and consequently nearer to the route of communication between Mesopotamia and Syria. We shall look for further news of this reported outbreak with much interest. Meanwhile we may note that the subject of recent appearances of plague, and the prospect of the disease again extending to Europe, is to be brought before the Society of Medical Officers of Health this evening by Mr. Netten Radcliffe.

THE HARVEIAN SOCIETY.

ON Thursday evening, the 6th inst., this Society held a *conversazione* in its rooms, which was very well attended. The walls were covered with pictures, pathological drawings, &c., and the Watcombe Terra-Cotta Company exhibited some beautiful specimens of their work. Dr. Broadbent, the retiring president, gave an instructive and interesting address, after which followed the usual vote of thanks to the officers of the Society. From the treasurer's report the finances of the Society appear to be in a flourishing condition. The following is the list of officers for the forthcoming year:—President: Dr. Cock. Vice-Presidents: Dr. Tilbury Fox, Mr. T. Carr Jackson, Dr. Thomas Morton, and Mr. W. F. Teevan. Treasurer: Mr. Henry Power. Hon. Secretaries: Mr. H. E. Sewell and Dr. Fothergill. Council: Dr. Broadbent, Mr. G. de G. Griffith, Mr. J. Lennox Browne, Dr. W. H. Day, Dr. John Easton, Dr. Symes Thompson, Mr. Gascoyen, Mr. H. Cripps Lawrence, Dr. Hughlings Jackson, George Eastes, M.B., and Dr. Farquharson.

FEMALE MEDICAL STUDENTS.

THE Committee of the Queen's Hospital, Birmingham, have resolved, by a narrow majority, to allow female medical students to attend the clinical instruction of those members of the staff who are willing to give it to them. A question has been raised whether the Queen's Hospital has any power of separate action in the matter, so long as the existing arrangement for clinical instruction is in force between the Queen's College and the General and Queen's Hospitals. While negotiations are pending, we shall do no more than express a hope that it will be found possible to promote the best interests of medical education without doing violence to that honourable understanding between colleagues which is essential to the healthy life of any school.

AN incident occurred some few days ago at Rotherham showing that some care and discretion should be exercised in choosing officers for subordinate appointments in workhouses. It appears that a nurse in the hospital ward of the Rotherham Union Workhouse put a child into a bucket of boiling water, washed his face in the same water, and afterwards placed him before the fire to dry. The child has, as a natural consequence, been dangerously ill, and is now of course in a pitiable condition. An examination into the antecedents of the nurse showed that on admission into the workhouse she was, chiefly on account of ill-treatment by her father, stunted in growth and semi-idiotic, that she on many occasions gave great trouble by her disorderly conduct, but that she was nevertheless thought by the guardians of Rotherham a fit and proper person to nurse sick paupers.

ON Tuesday night last Messrs. Stewart, Robey, Elliott, and Duncan, on behalf of the students attending the Practice of Medicine class at Anderson's University, Glasgow, during the present session, presented Dr. M. Charteris (who is lecturer *pro tem.* in the absence from illness of Professor Wood Smith) with an address, testifying to his superior abilities as a lecturer, and competency as a practical teacher.

OUR readers will have seen by the daily papers that a deputation from the Strand Board of Works waited upon the President of the Local Government Board on Monday last to urge a sorely-needed reform. The want of adequate mortuary provision in the metropolis is constantly forced upon the attention of the profession and the public by the disclosures elicited at inquests. Dr. Joseph Rogers, who headed the deputation, and who has taken a very active part in promoting its views, contended that it should be made compulsory on every local board of health to establish a suitable mortuary on a common plan to be approved of; that these mortuaries should be in the proportion of not less than one to every 50,000 inhabitants; that powers should be provided for the compulsory purchase of property; and that the medical officer of health or the poor-law medical officers or the relieving officers should be empowered to order the removal of a corpse to the district mortuary, in all cases where it was found that the family occupied only one room, and in other instances where it was desirable. Mr. Sclater-Booth acknowledged the great importance of the subject, but he could give no definite statement until he had consulted the Home Secretary.

THE *Pall Mall Gazette* quotes some statistics of the sanitary condition of Berlin, from a lecture recently delivered by Dr. Stamm, in the capital. The lecturer demonstrated that the death-rate in Berlin has for some years been considerably higher than that of other European cities. The returns published periodically here by the Registrar-General have taught us this. Dr. Stamm attributes the excessive mortality developed mainly to the overcrowding of the population of the poorer quarters of the city, owing to the exorbitant rates to which house-rent has risen. The number of people residing on each hectare of ground is computed to be nearly five times as great as in London. Dr. Stamm urges the imperial government to amend the law regarding house property, so as to make it unlawful to build houses of such a height as to be prejudicial to public health, and to abolish altogether the practice of living in cellars. The milliards exacted from France after the war have certainly not benefited the people who formed the rank and file of the German armies in the struggle, and the Nemesis of wealth has overtaken the once thrifty, frugal, withal dirty city on the Spree.

THE December number of the *New York Medical Journal* contains a description of a case in which abscess of the liver opened into the pleuræ and bronchi. During life the man suffered from diarrhœa, and complained of pain in the chest. At the autopsy the right pleural cavity was found full of pus, with a few threads of "gangrenous tissue." The lung was bound down to the diaphragm by adhesions. The liver contained a large abscess, which opened into the pleuræ. The mucous membrane of the large intestines from the anus to the ileum was the seat of ulcers from half an inch to an inch in extent, with gangrenous bases, and separated from one another by portions of healthy tissue.

IN London last week 1526 deaths were registered, including 55 from measles, 83 from scarlet fever, 8 from diphtheria, 69 from whooping-cough, 30 from different forms of fever, 20 from diarrhœa, and 351 referred to diseases of the respiratory organs. Different kinds of violence caused 68 deaths. On Saturday the London Fever Hospital contained 112 patients, and the hospitals at Homerton and Stockwell 274 patients, 178 of whom were under treatment for scarlet fever. The latest returns from Indian cities place Calcutta in a very unfavourable light, the death-rate having reached 54 per thousand annually.

SURGEON-MAJOR THEOBALD RINGER, M.D., reports a curious case of incessant hiccough in the *Indian Medical Gazette* for December 1st. The patient, a native trooper, was admitted into hospital for a severe attack of secondary syphilis (rupia), and treated with the bichloride of mercury. At the end of five weeks he was seized with hiccough, which continued with little cessation for five days, in spite of the exhibition of chloroform, hydrate of chloral, sinapisms, subcutaneous injections of morphia under intercostal muscles, belladonna plaster to epigastrium, and calomel, in one large dose. On the sixth day a blister was applied to the origin of the phrenic nerve, and he was given extreme doses of iodide of potassium every six hours, and a full dose of quinine once a day, with iced soda water to drink. This treatment was carried on for eight days, the hiccough becoming daily less frequent, until on the tenth day it entirely stopped. The dose of iodide of potassium was gradually reduced as improvement took place, and on the twenty-third day the man was "discharged to duty."

A NEW hospital was formally opened at Grantham last week by the Countess Brownlow. The institution stands on a good site at one end of the town. At the entrance to the ground on which the hospital stands is a separate building adapted for the reception of cases of infectious disease. Another separate building contains a well-appointed laundry, and at the rear of this is the mortuary. The arrangements for ventilation and drainage appear very good. As there is an old and self-aiding dispensary in Grantham, the hospital is intended only for in-patients, each of whom will contribute a small sum towards the cost of maintenance.

THE death-rate in the Marylebone district has, according to the monthly report of Dr. Whitmore, medical officer of health, just issued, reached the high figure of 30·56 per thousand annually. This excess is chiefly due to the fatal prevalence of diseases of the respiratory organs. Pneumonia and bronchitis claimed respectively 130 and 110 victims in the month. There appear now to be laudable promptitude and energy infused into the work of cleansing the streets of the parish. In one week 5000 loads of snow were carted away, there being required for the labour 270 men and 156 carts.

A SERIOUS outbreak of small-pox prevails in Manchester, Salford, and adjacent villages. In Pendleton thirty-five persons have been attacked with the malady, of which number seventeen have already died. So great is the alarm felt that one street has been barricaded and a black flag hoisted to warn off the inhabitants. In all the infected localities the fatality of the disease appears unusually high. Thus in Hulme, of five cases reported in one day, three proved fatal. The gravity of the occurrence demands the utmost promptitude and activity of the sanitary authorities.

DR. STEPHEN H. WARD has been unanimously elected consulting physician to the *Dreadnought* Seamen's Hospital at Greenwich, having resigned the physiciancy, a post that he had held for twenty years. The managing committee passed a resolution in connexion with the resignation very complimentary to Dr. Ward, as showing that his very long term of active service has been appreciated by the supporters of the Society.

WE have received intelligence from the last acquisition to our colonies, Fiji. The small force of Royal Engineers at Levuka was temporarily accommodated in a cotton store and hut barracks, and the men are in excellent health and busily engaged in colonial works.

THE Local Government Board have, under the provisions of the Public Health Act, issued a provisional order constituting the Town Councils of Pembroke and Haverfordwest the improvement commissioners of Milford, and the rural sanitary authorities of Pembroke, Haverfordwest, and Narberth a joint board to act as port sanitary authority for Milford. This is one of the first instances of the appointment of a joint board under the special section introduced into the Consolidation Act of last year.

A FUND is being raised by the Lord Mayor, in conjunction with a local committee at Grays, for the purpose of reimbursing the officers of the school-ship *Goliath* for losses sustained by the late catastrophe. A sum of at least £1500 is required, about half of which is already subscribed. We are requested to state that Dr. Harry Leach, port medical officer, and a member of the local committee, will be happy to receive contributions towards this object, which has our earnest sympathy and support.

The Times of the 16th inst. devotes considerable space to an article on the prevalence of infectious fevers in England. It is an admirable epitome of the various causes which lead to the production of the most frequent of infectious diseases, and will serve to instruct the public as to the true nature of these diseases, and no doubt interest them in the cause of sanitary science generally.

Two official inquiries have already been held this year by the medical inspector of the Board of Trade as to ships that have arrived in British ports with cases of scurvy on board. We learn by the courtesy of Mr. Johnson Smith that fourteen cases of the disease were received into the Seamen's Hospital at Greenwich in 1875, all of which came from British vessels.

PROFESSOR SANDERSON ON THE PROCESS OF INFLAMMATION.

LECTURE II.

THE second Lecture (delivered on December 17th) was on "Determination and Inflammatory Congestion." The former of these expressions was, as before stated, introduced by Parry, and connected by him with a theory as to the "action of the arteries" not materially different from that of Hunter. By later writers it has been understood to mean that sudden *afflux* of blood towards an injured part which ordinarily follows the application of any kind of irritant. As a German equivalent, Virchow introduced the word "Wallung" (surging), which has been since constantly used by his successors. It is highly desirable, with a view to accuracy of statement, that the employment of the word determination should be strictly limited to the primary acceleration of the blood-stream in and about an injured part, and should not be so extended as to comprise the subsequent "inflammatory" congestion.

One of the first, if not the first, of the pathological writers who correctly explained the phenomenon was Dr. C. J. B. Williams. In the Gulstonian Lectures delivered more than thirty years ago he gave the first true and complete account of the vascular changes which take place in a living tissue immediately after injury, and particularly of the behaviour of the arteries leading to the injured part, as observed experimentally in the transparent parts of animals. Poiseuille had paved the way for such investigations by his most accurate and exhaustive study of the capillary circulation in the normal state (as observed in the web and mesentery of the frog), his purpose being to vindicate the Harveian doctrine of the circulation against those who, in his day, dis-

puted the complete adequacy of the heart for the maintenance of the circulation. Dr. Williams, familiar no doubt with Poiseuille's observations, which had been published six years before, set to work to elucidate the clinical phenomena of inflammation by microscopical studies. These studies led him to the conclusion that in the process of inflammation there are, as regards the behaviour of the vascular system, two distinct stages—a first stage that of the primary afflux, which he called "determination with increase of motion," and a second in which the circulation becomes slower and slower until the retardation results in stasis—facts which he expressed by the term "determination with diminished motion." Hunter's observations had long before shown that the first of these effects was not necessarily followed by the second—that the inflammatory blush might subside, leaving no trace. Williams desired to see how this happened in the web of the frog's foot, and with this view used in his experiments the mildest *moxa* he could think of, such as alcohol or solution of salt. He found that the effect of the application of such agents showed itself in accelerated rush of blood through the capillaries of the affected part and its neighbourhood, and that this was invariably accompanied with dilatation of the arteries by which these capillaries were supplied. The observation was a very simple one, but it was important as enabling Dr. Williams to bring into relief the error which Hunter had undoubtedly made in confusing the primary afflux with the secondary congestion.

As Dr. Williams was the first who clearly understood the mechanism of the primary afflux, so it is to Mr. Wharton Jones that we must give credit for the first true interpretation of the phenomena of inflammatory congestion, as well as for the correct application he made of his experimental results to inflammation in man and in the higher animals. The doctrine commonly taught at the time that Mr. Jones's well-known prize essay on inflammation appeared, was that the diminished velocity of the capillary blood-stream, and the tendency of the capillaries to become choked with the corpuscular part of the blood, were attributable to two causes—namely, to the supposed dilatation of the arteries, and to the exudation of liquor sanguinis within the area of diminished motion. It was believed, in short, that the blood contained in the capillaries became more and more corpuscular, in consequence of the leakage of the liquid part of the blood into the tissue.

Mr. Wharton Jones was able to show that this conception of the process was founded on a mistake, and he did so, not by reasoning about it, but by observing with great attention what happened. He showed that although the slowing of the circulation was more apt to happen when the circulation was generally languid than in the contrary case, it was not due to any cause affecting the great vessels, but exclusively to increase of capillary resistance, and that *stasis* began by the sticking of the coloured blood-corpuscles to the capillary wall, and subsequently to each other.

The next important step in the investigation of the process of congestion was undoubtedly the publication of Mr. Lister's paper in the Philosophical Transactions, on the "Early Stages of Inflammation." The question to the solution of which he addressed himself is best stated in his own words:—"How does it happen that while the arteries still retain that enlarged calibre which is best adapted for the transmission of blood, its accelerated movement comes to give place to unnatural retardation and ultimate stagnation?" The first step in the investigation was to strengthen by well-devised experiments the distinction already drawn by his predecessors between Dr. Williams's determination with increased motion and determination with diminished motion—between afflux and congestion,—defining the former as a purely functional and transitory local disorder of the circulation, leaving no alteration in the part which can be subsequently recognised; the latter as the first beginning of an organic lesion as distinctly traceable after death as during life. As regards congestion, Mr. Lister took as his starting-point a fact which, although it had already been recorded by Dr. Heinrich Müller, was rediscovered by himself—namely, that the phenomena of stasis can be induced in a part even after the circulation has ceased; for he found that if in the amputated limb of a frog mustard or some other mild moxa is applied to the web, the injured part soon becomes congested, blood-corpuscles collect themselves from the surrounding parts into the capillaries of the affected part, which soon become choked with blood-corpuscles. In this remarkable phenomenon he showed that it was an error to suppose that there was anything like migration of the corpuscles towards the seat of injury of such a kind as might be expected to result from increased attraction between them and the injured tissue, for he was able to observe distinctly that it only occurred when, as is usually the case, movements of the blood contained in the vessels were produced by those irregular alternations of contraction and relaxation which are commonly observed in the arteries of the web both during life and shortly after death; so that here, as shown by Mr. Wharton Jones in the ordinary case of stasis, the immediate cause of the congestion was adhesion of the corpuscles, first to the injured vascular wall, and secondly to each other.

Mr. Lister next proceeded to inquire experimentally into the nature of the physiological changes which manifest themselves in the increased capillary resistance of injured parts. The first question to be determined was that of the part taken by the blood itself in the alteration. Was the crowding of the capillaries with blood-corpuscles dependent on their own increased attraction for each other, or on the influence exercised upon them then and there by the capillary wall? If the former, then blood discharged directly from a congested part ought to show peculiarities. By repeated observations both on man and animals he showed that this was not the case—i.e., that, so far as relates to the tendency of the corpuscles to become conservated, there is no difference between the blood circulating in inflamed parts and other blood. The consideration of this fact led at once to the conclusion that, just as in the analogous though by no means identical process of coagulation of blood, the fibrin-forming substance does not assume the solid form in the living bloodvessels so long as these are in a normal state, but does so at once whenever the internal vascular surface is injured, so in the capillaries of inflamed parts, the corpuscles show an unnatural aptitude to stick to the sides and to each other for a similar reason.

In this way it happened that Mr. Lister was the first to initiate a doctrine in favour of which recent researches have afforded very strong evidence—namely, that the essence of inflammation consists not in increased but in diminished vitality of the tissues affected, their condition being such as (to use his own expression) "to approximate to that of ordinary matter." According to this view, any moxa which would, if it acted with sufficient intensity, kill a living part, manifests itself in its minor degrees of activity by retardation of the circulation, but also by those subsequent extra-vascular changes which make up the process.

If this is true—if it is true that the change which takes place in the minute bloodvessels of an inflamed part may be defined as diminished functional activity, Mr. Lister argued that we ought to find evidence of an analogous change in the extra-vascular elements of the tissues. The only textural elements which, in the web of the frog, appeared accessible to investigation, with a view to the settlement of this question, were the pigment-containing cells of the cutis, on which (as is well known) the remarkable changes of surface-colour which manifest themselves in the frog under the influence of various external conditions (and particularly light and darkness) depend. These changes had been already investigated by Mr. Lister, and the exact nature of the appearances observed under the action of the various stimuli which affect them carefully recorded. The question to be asked as to these pigment-cells was, "Does a moxa, of such a kind as to produce inflammatory congestion and stasis, act on these bodies after the manner of a stimulus or not?" The answer was distinctly and unequivocally in the negative. It was shown that when the tissue is so injured its pigment-cells are to all appearance unaffected, its colour remaining unaltered. But if a frog which has been so experimented on is subsequently exposed to the action of any of those stimuli which naturally produce changes in its colour, it is observed that, while other parts of the body change, the congested part remains unaltered—a fact which to Mr. Lister appeared to tell strongly in favour of his conclusion already arrived at from the study of the capillary circulation—viz., that what happens in inflammation is tissue-spoiling, not tissue-stimulation. The value of this distinction will be better appreciated when we have had before us other more recently acquired facts.

MORTALITY AND OCCUPATION.

APPENDIX TO DR. RICHARDSON'S FIRST LECTURE "ON INDUSTRIAL PATHOLOGY."

[IN our notice of Dr. Richardson's first lecture to the Society of Arts "On Industrial Pathology" (THE LANCET, Dec. 18th, 1875) we referred, incidentally, to his table—collated for him by Mr. Noel Humphreys from the Registrar-General's Returns—from which he demonstrated the relative mortality of persons following one or other of the well-defined occupations of English life. We now publish the table in full, revised by the lecturer.]

Annual Death-rate per 1000 *of Males in England and Wales engaged in sixty-nine occupations in the three years* 1861, 1862, *and* 1871, *compared with the death-rate among Males of all occupations in the same years.*

Population.	Deaths actually recorded.	Deaths that would have occurred according to the standard rate.	Occupation.	Deaths of Males aged fifteen and upwards, engaged in different occupations, to 100 deaths of Males of all occupations.	Death-rate per 1000 Males Living.							
					15	20	25	35	45	55	65	75
9,722	135	215	Barrister	63	...	...	4·75	6·53	13·64	24·46	40·98	97·56
59,084	1,105	1,547	Clergyman	71	...	4·36	4·65	4·28	13·24	22·70	52·08	150·22
24,944	472	628	Protestant minister	75	...	9·90	5·83	7·30	9·33	24·60	56·27	163·93
228,248	3,160	4,173	Grocer	76	3·18	8·39	9·43	9·57	13·48	22·43	47·76	128·66
259,211	3,811	4,951	Grocers and shopkeepers	77	5·61		9·47	9·69	13·82	23·23	48·02	133·90
31,931	503	628	Gamekeeper	80	3·72	7·07	5·10	7·09	8·83	25·96	83·27	217·08
679,483	20,292	23,822	Farmer and grazier	85	10·91		8·84	9·01	12·53	23·39	57·10	169·58
11,829	154	180	Civil engineer	86	1·69	5·77	9·44	15·31	10·49	22·17	53·87	263·89
21,222	335	385	Bookseller, publisher	87	4·55	8·71	7·69	9·75	18·03	24·30	74·84	135·23
88,512	1,505	1,717	Wheelwright	88	2·60	7·37	7·08	10·00	17·01	27·42	66·61	172·34
105,441	1,890	2,114	Silk manufacture	89	7·10	8·90	8·78	11·03	15·07	27·33	63·40	161·78
4,831,547	88,458	97,737	Labourer	91	5·14		8·82	11·20	15·70	28·32	61·59	181·72
551,309	9,255	10,175	Carpenter, joiner	91	3·61	7·14	8·49	10·73	16·03	29·08	68·39	173·94
4,013	110	120	Banker	92	...	9·39	6·89	13·97	17·73	36·12	60·43	160·00
394,066	5,028	5,386	Domestic servant	93	2·42	5·63	9·01	13·68	18·57	31·84	78·48	227·86
89,693	1,718	1,814	Sawyer	95	3·50	5·71	7·02	10·41	15·42	30·93	74·23	215·47
52,142	693	721	Brass manufacture and brazier	96	3·80	6·79	8·72	13·90	18·36	39·00	69·38	177·85
22,681	388	406	Paper manufacture	96	3·08	10·09	8·53	12·68	15·30	27·00	70·81	201·04
16,864	243	253	Musical instrument maker	96	4·21	11·39	7·31	12·99	18·76	28·31	71·09	180·45
31,875	454	469	Gunsmith	97	2·41	6·76	9·12	13·01	18·27	38·06	78·54	183·95
316,713	5,233	5,390	Blacksmith	97	3·66	7·56	9·18	11·34	18·69	32·25	71·38	192·54
594,435	11,576	11,827	Shoemaker	98	5·00	9·27	9·52	11·36	16·64	30·65	68·52	187·93
406,709	5,151	5,231	Iron and steel manufacture	98	4·15	7·61	8·20	11·72	20·35	39·03	89·50	236·28
63,645	1,142	1,160	Tanner and currier	98	2·82	5·55	8·78	13·94	19·49	35·48	81·13	139·00
141,707	2,358	2,376	Baker	99	2·75	6·43	8·67	13·47	19·79	36·11	71·40	190·45
					6·32	8·59						
19,327,887	363,207	363,207	Males of all occupations used as a standard	100	7·39		9·85	13·05	18·53	32·15	66·76	165·84
257,003	3,408	3,395	Engine and machine maker	100	4·46	8·58	9·22	12·72	17·97	36·75	83·49	203·69
341,872	6,320	6,306	Wool and worsted manufacture	100	5·04	8·79	8·54	10·32	16·87	32·58	76·48	208·72
422,859	5,532	5,475	Iron, copper, tin, & lead manufacture	101	6·05		8·39	11·93	20·57	39·66	92·25	240·42
166,983	2,820	2,805	Bakers and confectioners	101	4·63		8·66	13·32	20·03	38·33	74·58	192·57
87,608	1,470	1,447	Schoolmaster	102	3·71	9·58	8·91	11·17	14·93	26·28	84·65	212·79
35,086	840	825	Solicitor, attorney	102	...	8·76	8·80	13·46	19·30	30·59	75·23	166·67
4,052	82	80	Roman-catholic priest	103	...	8·26	7·66	9·25	9·62	48·98	95·00	222·22
59,517	1,067	1,025	Watchmaker	104	4·53	11·25	9·81	11·99	17·14	38·18	70·31	187·27
23,502	349	333	Tobacco manufacture	105	2·78	12·51	12·22	14·56	15·66	34·23	57·80	184·21
43,514	1,135	1,067	Physician, surgeon	106	...	11·17	12·87	14·74	20·47	30·46	62·87	184·14
100,574	1,798	1,699	Shipbuilder	106	5·55	8·87	8·65	13·38	20·49	36·85	80·68	178·03
148,644	2,315	2,170	Messenger, porter	107	3·17	7·70	11·09	15·27	24·29	38·65	77·95	173·83
58,976	956	897	Coachmaker	107	3·51	6·10	9·38	11·83	24·39	39·27	80·40	229·69
27,406	571	532	Ropemaker	107	4·03	6·13	7·60	11·03	20·31	41·81	78·63	176·38
141,990	1,984	1,841	Draper	108	4·80	9·27	12·59	14·74	19·32	33·69	66·55	194·21
320,064	6,711	6,157	Tailor	109	6·44	10·87	12·00	13·85	20·06	33·00	69·82	184·51
1,041,473	19,305	17,709	Wool, cotton, flax, silk	109	7·14		9·29	11·66	18·55	37·23	85·27	226·17
50,181	782	711	Chemist and druggist	110	3·31	11·26	11·77	17·04	18·41	33·57	83·76	143·38
39,203	676	616	Commercial traveller	110	1·68	5·68	9·81	15·66	23·53	39·88	68·86	165·09
204,040	2,799	2,523	Insurance, bank, & commercial clerk	111	3·80	8·06	12·74	17·36	25·06	35·32	79·81	178·91
196,882	3,781	3,412	Butcher	111	2·32	5·89	10·05	17·32	22·45	37·45	82·23	201·02
17,149	279	250	Carver and gilder	112	5·67	8·10	9·15	15·82	26·00	32·17	84·89	184·21
20,044	457	404	Farrier	113	3·54	5·56	14·53	16·25	14·61	32·06	63·98	203·70
916,005	14,440	12,519	Miners & others connected with mines	115	8·08		9·84	12·45	20·47	43·59	100·26	248·07
583,079	10,187	8,884	Cotton and flax manufacture	115	5·47	9·24	9·54	12·10	19·78	42·33	94·78	254·17
95,190	1,396	1,213	Printer	115	4·74	10·79	10·68	16·09	24·24	39·68	75·49	205·48
20,015	351	302	Bookbinder	116	4·33	10·69	10·10	16·49	21·24	48·34	79·74	165·52
41,062	665	557	Glass manufacture	119	2·98	6·70	11·80	15·27	21·60	44·67	123·95	289·03
30,169	639	536	Fishmonger	119	3·47	7·50	12·64	17·35	22·69	37·09	85·16	181·54
245,269	4,256	3,536	Plumber, painter	120	3·02	7·13	9·44	16·36	27·78	46·68	92·97	181·82
187,321	2,755	2,275	Railway engine-driver, officer, servant, &c.	121	7·12	11·73	12·21	14·97	21·51	40·59	70·92	205·43
45,222	780	647	Tool, file, and saw maker	121	4·52	8·14	11·36	14·95	26·80	50·33	79·35	206·35
92,656	1,817	1,497	Harbour, dock labourer	121	3·54	8·53	11·16	15·91	24·96	42·53	86·75	181·97
33,989	920	747	Hatter	123	4·56	11·12	9·94	15·93	23·89	42·81	78·68	221·53
16,019	298	243	Coppersmith	123	4·51	10·05	10·98	14·22	20·17	54·26	110·63	130·43
6,189	124	101	Needle manufacture	123	9·87	10·53	9·50	19·12	21·60	39·72	68·06	223·53
29,425	546	442	Manufacturing chemist and dye and colour manufacture	124	6·25	12·77	11·39	15·88	20·73	38·53	96·04	244·60
32,157	712	560	Hairdresser	127	5·18	10·89	11·94	18·63	27·70	43·54	86·90	201·88
97,640	2,098	1,628	Bargeman	129	5·99	9·48	11·47	19·19	23·04	41·36	94·33	209·68
200,663	4,181	3,200	Carman, carrier, drayman	131	4·88	8·99	13·04	16·82	25·41	45·21	101·81	230·04
111,464	2,234	1,703	Housekeeper, groom	131	3·32	8·97	13·04	20·19	28·71	46·04	78·53	212·95
228,592	7,127	5,167	Inn and hotel keeper, licensed victualler, publican, &c.	138	9·57		14·49	20·44	28·59	43·03	74·65	217·92
69,811	1,320	959	Earthenware manufacture	138	4·04	10·26	7·08	20·69	33·67	58·04	128·47	233·70
92,142	2,213	1,551	Coachman (not domestic), cabman	143	3·06	10·91	12·18	20·25	29·54	47·24	90·86	200·76

Correspondence.

"Audi alteram partem."

ON PUNCTURE OF THE TESTIS IN ACUTE ORCHITIS.

To the Editor of THE LANCET.

SIR,—I see in your last number a communication from Mr. Henry Smith on the subject of puncturing the testicle in orchitis, to which I must necessarily give a reply, as he there directly calls on me for the reasons which led me, in my recent work on Surgery, to speak of that operation in the following terms:—"I never saw any need for it, nor have observed any relief from following the practice in the very few cases in which I have seen it tried; nor can I see why it should relieve the pain." After perusing Mr. H. Smith's letter, I am driven to confess that I am still substantially of the same opinion, though in this, as in so many other cases, when one's attention is drawn specially to any passage, one sees that the meaning might have been better expressed. I will tell Mr. Smith and your other readers on what evidence I formed my conclusion, and leave them to judge between us. I have no love for controversy, and think it a little hard of my friend, Mr. Smith, that he should select me for his antagonist, when he could have found foemen so much more worthy of his steel in Mr. Curling, who says, "This operation has always appeared to me to be founded on wrong views in pathology, and to be unsafe in practice"; or in Dr. Humphry, who passes over his favourite plan of treatment with the barest possible mention.* However, Mr. Smith is doubtless proceeding on the prudent principle of disposing of the weakest first.

My reasons for my statement are as follows:—

1. "I never saw any need for it." When I was a student cases of orchitis were always treated actively; free leeching, nauseating doses of antimony, a course of calomel and opium, and other so-called "heroic" remedies. It was, I think, my late teacher and regretted friend, Mr. Henry Charles Johnson, who first showed me how unnecessary all this is, and how, in most cases, if the patient is simply put to bed, and his testicle well supported in a good poultice, the pain and inflammation will subside spontaneously. As Mr. Smith deals with cases of orchitis by the thousand, I think if he will try this plan in the next few hundred cases, he will understand what I mean, and will come to agree with Dr. Humphry that "it is not usually necessary to adopt any severe plan of treatment," and that "most cases end spontaneously in resolution."

2. "I have not observed any relief from following the practice in the few cases in which I have seen it tried." (I may say that these cases were in my own practice, though I did not think it worth while to say so, as I do not see how it matters to the reader, and I wished to avoid the egotistic appearance produced by constant references to one's own doings). This passage would have represented my meaning better if I had written "any *decided* relief" or "any relief sufficient to justify a proceeding which (with all respect to Mr. H. Smith) is not free from either pain or danger." When I first heard of this plan of treatment having been revived in Mr. Smith's practice, I gave a trial to it, which satisfied me that the relief obtained was not more than could be more securely and more rationally effected by rest and soothing measures. If I am wrong in this, the controversy does not lie merely between Vidal and Mr. H. Smith on the one side, and my humble self on the other, for I think I can claim the very great majority of hospital surgeons as being of the same opinion. At the same time, I allow that some relief does often follow, due, as I believe (following in this Mr. Curling and other eminent authorities), to the evacuation of the fluid from the tunica vaginalis, not to the incision of the albuginea.

3. Finally, I say that I cannot see why the puncture of the body of the testis should relieve the pain. Mr. Smith says that "the unyielding tunica albuginea is freely incised, and that the tension is thus taken off the compressed and swollen testis;" but he takes no notice of the forcible argument of Gosselin's (for which see Curling's Diseases of the Testes, third edition, p. 265), "that the cases which Vidal de Cassis treated in this way were cases of gonorrhœal orchitis, in which the body of the testis very seldom suffers"; and, in fact, I should almost infer from his letter, and from the surprise with which he seems to have received my remarks, that he has never consulted Mr. Curling's excellent work, in which this question is treated at a length which I cannot expect your space to permit, and with an ability and wealth of information to which I can lay no claim. Nor does Mr. H. Smith explain to us how it is mechanically possible to take off the tension from the compressed and swollen testis by the incision of its envelope, and yet without producing any hernia of the tissue compressed by this envelope. For myself I confess I do not understand it, nor can I see how splitting the tunica albuginea, which covers the body of the testicle, can relieve the tension of the swollen epididymis, or how in any case the incision of a membrane closely united in all its parts to a parenchymatous organ inside it can relieve the tension of that organ, except by allowing the passage of the inflamed tissue, or some part of it, through the incision. We must recollect that the albuginea is not a bag like the vaginalis, but that it is intimately united to the body of the organ. The slightest puncture of the vaginalis will relieve the tension of every part of the bag; the freest incision of the albuginea can surely only relieve the tension of the part immediately beneath the incised portion of the membrane—and that either by the evacuation of blood (for there is no pus to evacuate) or by permitting a hernia of the secreting tissue. Looking at the matter from a theoretical point of view, we are surely entitled to expect some more definite explanation from Mr. H. Smith of the *modus operandi* of his favourite remedy, and I hope I may say without offence that, looking at it from the point of view of surgical literature, while flattered to find that my work has attracted Mr. Smith's notice, I should have expected to find more proofs of acquaintance on his part with works of greater authority and older date. But Mr. Smith will perhaps say that he holds theory and books cheap as compared with the results of practice, and that his plan is all that could be desired, fulfilling the three great desiderata—*tuto, cito, et jucunde*. The idea of hernia testis, or permanent injury to the organ, is due to "the fertile imagination of alarmists who are haunted by visions of it in their dreams." Well, if he had referred to the *Archives Générales de Médicine* for February, 1870, he would have found there the two following cases recorded by M. Salleron (for the reference to which I am indebted to Mr. Curling), in both of which the testicle was entirely destroyed by the operation.

"CASE 1.—A soldier contracted gonorrhœa, which subsided, leaving only a slight discharge. Three months afterwards he was attacked with acute orchitis; this was very severe and painful, and as it did not yield to the frequent application of leeches, Dr. Salleron punctured the testicle with a narrow bistoury, according to Vidal's plan. The incision into the tunica vaginalis did not exceed a centimetre at the outside. It gave exit to a few drops only of serum and about half a spoonful of blood from a scrotal vein. In an hour afterwards the patient was relieved and the fever had subsided. Next day M. Salleron found very little diminution in the swelling, and on examining the wound he distinctly perceived a small tumour of a reddish-grey colour projecting from the opening in the tunica albuginea. On seizing this with the forceps, it was easily made out to consist of the swollen seminiferous tubes. In spite of all precautions and dressings the hernia of the testis continued to increase, and in ten days the gland was completely empty and reduced to a shell formed by the fibrous tunic, which contracted to a small tumour the size of a filbert.

"CASE 2.—A soldier in garrison contracted gonorrhœa, which was treated in the usual way, but he resumed duty before the discharge had quite ceased. Three months afterwards he was attacked with acute orchitis, which compelled him to go into hospital. The swelling was considerable, but the local and constitutional symptoms were not severe. Two days after his entry into hospital, the surgeon-in-chief punctured the testicle with a bistoury. The operation was followed by prompt relief, but some days after-

* System of Surgery, 2nd edit., 1871, vol. v., p. 113.

wards all the seminiferous structure was gone, and there remained only a nodule, formed by the contracted fibrous tunic."

Now it is no answer to facts like these for Mr. H. Smith to say, "I have operated in more than a thousand cases, and never saw any harm." We all know what out-patient cases are worth. A thousand men have their testicles punctured. They all go away laughing with delight, and live happily ever afterwards. But the records of M. Salleron's experience justify us in suspecting that if matters had been managed in a rather less "happy-go-lucky" style — if Mr. H. Smith had carefully observed the sequel of all his thousand cases, he might have found a few in which the patient has been relieved from his orchitis by the radical process of being relieved of the testicle altogether.* And surely one such instance would outweigh a thousand others in which the patient obtained a relief from pain, which he could, after all, have easily procured by less dangerous means.

I hope the foregoing will be sufficient to relieve me from Mr. Smith's imputation of "hazarding an opinion upon insufficient data." I may be wrong, but, if I am, it is after due deliberation, and, at any rate, I err in very respectable company. Mr. H. Smith's plan of calling witnesses to back his opinion is new to me, and has an odd look of deciding surgical questions by a *plébiscite*. But I can assure him, without any disrespect to Messrs. Rose, Barrow, and the others whom he has named, I could produce quite as many witnesses on my side if I chose to argue the question that way; in fact, I have heard the treatment so uniformly reprobated that I innocently believed (so little do we know of each other's practice in this great city) that Mr. Smith had given it up, and I was rather doubtful whether it was worth while to notice it. Now I find that in some eleven years (since 1864) he has punctured the testicle in more than one thousand cases, though recommending the treatment "only in the most acute form of the disease." My ignorance of the benefits of this method is no doubt due, as Mr. Smith says, to my not having met with cases appropriate for it; but surely that must be his fault, not mine. He must have punctured every testicle in London which required the operation, and in saying this I am sure I am doing less than justice to his surgical activity. For myself, I fear I must, as at present advised, rest contented with a more humdrum style of practice.

I am, Sir, yours, &c.,

Great Cumberland-place, Jan. 10th, 1876. T. HOLMES.

To the Editor of THE LANCET.

SIR,—In your issue of to-day Mr. Henry Smith, in his paper on the Treatment of Acute Orchitis by Puncture of the Testis, states that I differ from him as to the advisability of the operation he adopts, and that I consider that the benefit which in many cases is derived from the treatment is due not to the puncture of the testicle, but to the evacuation of fluid from the tunica vaginalis. He does not, however, state why I have formed this opinion; I should, therefore, feel obliged if you would allow me to explain the reasons which have led me to this conclusion.

When I had the opportunity of watching Mr. Smith's practice, I noticed that while many cases received benefit, others received little or none. It was also evident that the apparent success was greater than that which actually occurred, as patients who were not relieved would not again return to risk a repetition of a treatment which they might possibly consider barbarous.

When, subsequently, patients with acute orchitis came under my care, I found that relief only followed this treatment in those cases in which a certain amount of fluid had accumulated in the tunica vaginalis. Often have patients experienced instantaneous relief by the evacuation of one or two drachms of this fluid with a fine trocar, while, on the other hand, in two cases in which this fluid did not exist, puncture into the substance of the testicle was followed by no mitigation of the symptoms.

I have tapped the tunica vaginalis in many cases of acute orchitis, and have never yet been disappointed in the result. While I meet with this success, I shall not feel inclined to adopt the more severe proceeding which Mr. Smith has so ably advocated.

I am, Sir, your obedient servant,

ARTHUR FERGUSSON MCGILL, F.R.C.S.

Park-square, Leeds, January 8th, 1876.

To the Editor of THE LANCET.

SIR,—Though Mr. Henry Smith has not called me in as one of his witnesses, he is well aware that in the years 1864-5-6 I punctured the testicle in about twenty cases, with a view to testing the efficacy of Vidal de Cassis' operation. Some of my cases were published in a contemporary, and my conclusions as there expressed are partly favourable to the operation Mr. Henry Smith advocates. I am of opinion that in those cases in which the tunica vaginalis contains serum in any considerable quantity great relief follows puncture, even if the puncture does not extend into the tunica albuginea. I am glad to see that my views in this respect are confirmed by Mr. McGill, of Leeds, whose opinion Mr. Smith quotes.

I am inclined to think, however, that antimony and opium, administered in full doses internally, give almost as speedy and more lasting relief of the symptoms in all other cases, and that even when a puncture is made, it is almost always necessary to follow it up by doses of opium in some form or other. For these reasons, and because in one or two cases the patient has fainted, and in another bleeding was troublesome at the time of the puncture, I have abandoned the operation, and should now only resort to it when, *with* the orchitis, there is considerable effusion into the tunica vaginalis.

I am, Sir, your most obedient servant,

W. SPENCER WATSON, F.R.C.S. Eng.

Henrietta-street, Cavendish-square, W., Jan. 7th, 1876.

THE

LONDON COLLEGE OF PHYSICIANS AND THE TITLE OF "DOCTOR."

To the Editor of THE LANCET.

SIR,—The use of the title of "Doctor" by persons not being graduates of a university is one of the subjects which will be considered at the next meeting of the Comitia Majora of the Royal College of Physicians. I think that students of the English schools of medicine have a real grievance, which ought to be taken into consideration at that meeting.

North of the Tweed all schools of medicine are affiliated by one or other of the Scotch universities, so that a student in that country can obtain the M.D. degree at less cost and with no greater amount of brainwork than it takes an English student to obtain the M.R.C.S. and L.R.C.P. It may be said that the latter, as viewed by the profession, ranks as high as the former. This may be true; but outside the profession it is certainly not so, and to the medical practitioner it is a most important matter how those who are beyond the boundary line of the profession estimate his qualification. And it is known that the public consider the man who can style himself "Doctor" to be professionally superior to him who is only called "Mr.," and attaches the word surgeon to his name. As regards the English Universities, Oxford and Cambridge are so expensive, and at the London University, the standard, not only of medical but of scientific knowledge, is so high that it is only the few who are rich, or the still fewer who possess extraordinary physical and mental powers, that can obtain an English degree in medicine. The authorities of the Scotch universities, no doubt, are aware of this, and keep their doors closed against English students. The Royal Colleges of Physicians and Surgeons are the most important licensing bodies to which the majority of English students can present themselves. The College of Physicians kindly admits students to a very searching examination on the payment of 15 guineas, and if successful they are dismissed with a licence to practise,

* Readers of Tom Hood may remember the Arctic navigator whom his sweetheart had scolded for taking snuff. "One change you will be glad to hear, the effect of Polar snows; I left off snuff one pinching day, through leaving off my nose."

but with no title by which the public may recognise them as qualified medical practitioners. They are not "doctors," for a bye-law of the College debars them from assuming that appellation. They are not physicians, for only members and fellows of the College have a right to call themselves such; and they are not surgeons unless they possess the diploma of the College of Surgeons. The profession are now desirous that the College of Physicians should become the chief examining board of the general medical practitioners of England. And it is to be hoped that they will soon seek to obtain the power, if at present they do not possess it, of conferring a well-known medical title upon those to whom they grant licences to practise. Might not a lesson be taken from the conduct of the Theological College of St. David's, Lampeter. The authorities of that college felt that their divinity students, who had passed through the required curriculum of study and the examinations, had a right to some title or degree. They therefore applied to Parliament and obtained the power of conferring the degree of B.D. upon theological students.

I am, Sir, yours faithfully,

January, 1876. G. S.

To the Editor of THE LANCET.

SIR,—Now that the Royal College of Physicians has been generous enough to come forward and commence the consideration of the feasibility of allowing those qualified at their college (though not graduates) the privilege of styling themselves "Doctor," it seems hard that two such strong letters as those in your last number from "F.R.C.P." and "An Old L.R.C.P. Lond.," should be the first to greet this talked of permission on their part.

From the position "F.R.C.P." has attained, surely he can be liberal enough to allow this privilege to a brother not equally fortunate in having graduated (possibly, and very probably, only for want of means).

As for "An Old L.R.C.P.'s" threat on the subject, it would seem that because he happened fifteen or twenty years ago to take the licence, and up till now has not been able to use the title coveted, therefore he is jealous of the possibility of this privilege being accorded to other present licentiates (who are doubtless pleased at the prospect), and also those who may now go up to that board, and by whom the qualification would be more coveted.

The *pros* and *cons* on the subject have been so thoroughly aired some time back, that it seems useless to refer to them again.

The examination is quite as severe—if not more so—as that at many of the Scotch and Irish universities, and all I anticipate the London College of Physicians mean by this privilege is simply to allow those who have qualified as *physicians* some distinguishing mark from those who have only qualified as *surgeons*. And very right, too, any liberal man will say it is. And it is doubtless solely on this ground that the Scotch and Irish colleges permit it.

Your obedient servant,

January 10th, 1876. M.R.C.P. EDIN.

To the Editor of THE LANCET.

SIR,—I beg to join in the protest addressed to you by "An old L.R.C.P. Lond.," in your last issue, against the London College of Physicians rescinding the regulation relating to the titles of its fellows, members, and licentiates. The idea naturally suggests itself, why is any change contemplated at all? As far as the licentiates are concerned, I can quite understand the College wishing to do something to settle their status, which at present is so uncertain. When the examination was first instituted, a great many men went in for it, as giving a higher standing than the examination of the Apothecaries' Society at that time, though not at all wishing to dub themselves doctors; but since that time many who have passed put "Dr." before their names, on their brass plates. The public knows a great deal too little about our many degrees and diplomas to understand any distinction between different doctors, and the consequence is, the plain "Mr." suffers for his scruples. I believe there is great discontent in the body of the profession on this subject, and communications have been made to the College of Physicians, asking them to enforce their present bye-law against L.R.C.P.s who style themselves doctors. Whether there is any legal difficulty, or whether the College is only too complaisant, I do not know; but in the meantime nothing is done, and the licence is becoming unpopular. I, for one, would certainly not like to send a son in for an examination when he would not know where he was after passing it. Perhaps the new proposal is meant to meet the difficulty with regard to the licentiates by allowing them to call themselves doctors; if not, I only hope the College will be most strict in preventing any licentiate doing so.

I am, Sir, your obedient servant,

Jan. 10th, 1876. A YOUNG L.R.C.P. LOND.

To the Editor of THE LANCET.

SIR,—Although I agree with all that "F.R.C.P." and "L.R.C.P." have said on this matter in your issue of the 8th inst., I consider they have omitted one important point, which is, that the bye-law in question should not only be left as it is, but should also be enforced. At present I see it broken with impunity around me, and it acts as a check on those only who still feel the (now apparently) old-fashioned prejudice to breaking their word.

Your obedient servant,

January 10th, 1876. ANOTHER L.R.C.P.

Medical News.

DR. CHARLES A. WEST has been placed on the Commission of the Peace for the borough of Bodmin.

SIR JAMES PAGET, Bart., F.R.S., President of the Royal College of Surgeons, will deliver the next Hunterian Oration.

THE Dublin Hospital Sunday Fund will distribute this year a sum of £3620, an amount considerably in excess of last year's grant.

DR. GEORGE JOHNSON, F.R.S., F.R.C.P., has been elected Examiner in Medicine at the Royal College of Surgeons of England, in the room of Dr. Wilks, resigned.

MORTALITY OF HOSPITALS.—Mr. James Heywood, F.R.S., President of the Statistical Society, has given the sum of £20 to be presented with the "Howard Medal" in November next. The essays, as already announced, are to be sent in on or before the 30th June, 1876. The full title of the essay is "On the Mortality of Hospitals (General and Special) in the United Kingdom in times past and present."

KENT COUNTY PRISON.—It would appear that the condition of this prison is so unsatisfactory as to require radical changes both in its construction and administration. The report of the chaplain, just published, shows that during the past year 1894 male convicts were punished for prison offences. This represents an amount of insubordination and misconduct out of all proportion to the number of prisoners confined. The county magistrates should put their house in order as speedily as possible.

DEATH-RATE IN IRELAND.—A Parliamentary return, obtained by Sir Arthur Guinness, has just been printed, showing for each of the ten years ending the 31st of December last the total number of deaths registered and the number from zymotic diseases in each urban sanitary district in Ireland having a population of 10,000 and upwards in 1871. In Dublin, from 1865 to 1874, both inclusive, the total number of deaths registered was 70,226, and of that number 16,412 were from zymotic diseases, being at a rate of mortality per 1,000 inhabitants of 28·3 from all causes, and 6·6 from zymotic diseases. The same course is adopted as to Belfast, Cork, Limerick, Londonderry, Waterford, Rathmines, Kingstown, Galway, and other places in Ireland. The document shows that in Dublin in the ten years mentioned 1552 died from small-pox, 1155 from measles, 2793 from scarlatina, 183 from diphtheria, 1267 from whooping-cough, 3215 from fever, 2410 from diarrhœa, and from all other zymotic diseases 3825.

POOR RELIEF IN IRELAND.—From a statement of the Local Government Board for Ireland lately published, we learn that the expenditure for poor rates in 1875 amounted to £975,351; which shows a decrease of £25,233 as compared with that of 1874. The total cost of the Medical Charities and Vaccination Acts was £141,000, being much the same as the previous year. The Consolidated Fund contributed for medical and educational purposes £74,000 in aid of the rates.

SOUTH YORKSHIRE LUNATIC ASYLUM. — A Report of the Visitors of this Asylum informs us that, although the asylum has only been open about four years, it already contains 605 patients; and that, if the influx of inmates should be so great this year as it was in 1874, the whole of the beds, amounting to nearly 900, will be required. A serious increase of lunacy in South Yorkshire is so evident that it is already contemplated to enlarge the building. The death-rate in the asylum was 15·23 per cent., while the recoveries amounted to 43·96 per cent.

WATER-SUPPLY TO WEST LONDON. — We learn from the *Standard* that some of the parochial authorities on the Middlesex side of the Thames have issued earnest appeals to householders to look closely after the water which is supplied to them. They state that the companies, with every desire to filter and purify the water, are unable to do so completely in consequence of the recent overflowings of the Thames, and that, notwithstanding all their care, a large amount of sewage-matter must find its way into the cisterns, an event which can only be prevented by close attention on the part of the householders themselves.

BEQUESTS, &c., TO MEDICAL CHARITIES. — Mr. Sands Cox bequeathed £12,000 for the erection and endowment of dispensaries at Aston, Hockley, and Balsall Heath, £3000 for the erection and endowment of one at Tamworth, £3000 for the erection and endowment of one at Kenilworth, £3000 to the Cottage Hospital at Moreton-in-the-Marsh, and a sum of money to found a scholarship at Guy's Hospital. The widow of Mr. Charles Turner, M.P., of Dingle Head, has given £2000 to the Royal Infirmary, £1000 to the Northern Hospital, both at Liverpool, and £100 to the new Brighton Convalescent Institution for Women and Children, in memory of her late husband. Mr. E. Russell, of Walsall, bequeathed £1000 to the Cottage Hospital in that town, and a sum sufficient to purchase fifty mechanical limbs (of the kind he wore himself) for the benefit of poor persons, and £100 to the West Bromwich Hospital.

Medical Appointments.

ANDREWS, S., L.R.C.P.L., M.R.C.S.E., has been appointed Registrar and Chloroformist to the Evelina Hospital for Sick Children, vice Miller, resigned.

BABER, E. C., M.B., L.R.C.P.L., M.R.C.S.E., has been reappointed Resident Medical Officer to the Atkinson-Morley Convalescent Hospital, Wimbledon.

BIRT, Mr. L. F. H. (Charing-cross Hospital), has been appointed a Resident Clinical Assistant at the Hospital for Consumption and Diseases of the Chest, Brompton, vice Shann, resigned.

BUCHANAN, T., M.B., C.M., has been appointed Medical Officer for No. 8 District of the Barony Parish, Glasgow, vice Speirs, deceased.

CLUTTON, H. H., B.A., M.R.C.S.E. (late House-Surgeon), has been appointed Surgical Registrar at St. Thomas's Hospital.

CROSS, P. H. E., L.R.C.S.I., has been appointed Medical Officer for the Workhouse and the fifth and eighth Districts of the Woodbridge Union, Suffolk, vice Tailer, deceased.

DAY, H., M.R.C.S.E., has been appointed Medical Officer for the Upton District of the Wirral Union, Cheshire, till March 25th, vice Way, resigned.

DENTON, T. J., M.D., has been appointed Medical Officer for No. 3 District of the Buckingham Union, vice M'Carthy, resigned.

EATON, J., M.R.C.S.E., L.M., has been appointed a Medical Officer to the Grantham Hospital.

GRAHAM, Dr. A., has been appointed Medical Officer to the Park-gate Lodge of the Free Gardeners' Union.

HILL, G., M.D., L.R.C.S.Ed., L.M., has been appointed Medical Officer for the Eastham District of the Wirral Union, Cheshire, vice Ball, deceased.

LEONARD, J., M.R.C.S.E., has been appointed Medical Referee at Chelsea to the Prudential Assurance Company, and Surgeon to the West Chelsea Sick and Benefit Society.

MADDEN, H. M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for No. 5 District of the Royston Union, Herts, vice Markby, resigned.

MAGUIRE, T. S., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for Nos. 1 and 2 Districts and the Workhouse of the Potterspury Union, vice Daniell, deceased.

MARKEY, T., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for No. 4 District of the Wells Union, Somersetshire, vice Edwards, resigned.

MATHEWS, J. S., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Attendant to the Royal Irish Constabulary, Cloghan, Co. Donegal, vice Keys, resigned.

MEREDITH, J. E., M.D., M.B., C.M., has been appointed Medical Officer for No. 1 District, and Public Vaccinator for Nos. 1 and 2 Districts of the Maidstone Union, vice Smith, deceased.

MILLER, H., M.D., F.F.P. & S. Glas., has been appointed a Physician-Accoucheur to the Glasgow Lying-in Hospital, vice Wilson, appointed Consulting Physician.

NELL, R. F., M.R.C.S.E., has been appointed Medical Officer of Health for the Penarth Urban Sanitary District.

NEWCOME, F., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Grantham Hospital.

NEWINGTON, A. S. L., M.B., M.R.C.S.E., has been appointed Medical Officer for the Wheatley District of the Headington Union, Oxfordshire, vice Perigal, resigned.

PARSONS, H. F., M.D., M.R.C.S.E., has been appointed Medical Officer of Health for the Goole Urban Sanitary District.

SEALY, J. T. H., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for No. 12 District of the Lincoln Union, vice Wrangham, deceased.

SHEPPARD, W., M.R.C.S.E., has been reappointed Medical Officer of Health for the Ashford Urban Sanitary District.

SHIPMAN, G. W., L.R.C.P.L., M.R.C.S.E., has been appointed a Medical Officer to the Grantham Hospital.

STODDART, W. W., F.C.S., has been reappointed Public Analyst for Somersetshire for two years: £200 per annum and sundry allowances.

TRAILL, H. S., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Chawleigh District of the Crediton Union, Devon, vice Ford, resigned.

WALKER, J. F., L.K.Q.C.P.I., L.M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Shinfield District of the Wokingham Union, vice Crisp, resigned.

WICKHAM, H., L.S.A.L., has been appointed Assistant House-Surgeon and Dispenser to the Kent and Canterbury Hospital, vice Manders, resigned.

WILSON, J. G., M.D., F.R.C.S.Ed., F.F.P. & S. Glas., has been appointed Consulting Physician to the Glasgow Lying-in Hospital.

WILSON, R., M.R.C.S.E., has been appointed a Medical Officer to the Grantham Hospital.

WORBOYS, T. S., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the first District of the St. Saviour Union, Southwark, vice Llewellyn, deceased.

Births, Marriages, and Deaths.

BIRTHS.

BEATSON.—On the 14th ult., at Sitabuldi, the wife of Surgeon-Major W. B. Beatson, M.D., Civil Surgeon of Nagpûr, of a daughter.

ILES.—On the 9th inst., at Watford, the wife of Wilson Iles, M.D., of a son.

MACAULEY.—On the 9th inst., at Hatfield Broad Oak, Essex, the wife of W. R. Macauley, L.K.Q.C.P.I., L.R.C.S.I., L.M., of a son.

MAIR.—On the 9th inst., at Ledbury-road, Bayswater, the wife of Robt. S. Mair, M.D., of a son.

MUIR.—On the 9th inst., at Oak Lodge, Blackheath-park, the wife of Sir Wm. Muir Muir, K.C.B., M.D., Director-General Army, of a son.

ROSE.—On the 4th inst., at Gosport, the wife of H. J. Rose, L.R.C.S.I., Surgeon-Major Army, of a son.

TODD.—On the 5th inst., at North Petherton, Somerset, the wife of W. J. Todd, L.R.C.P.L., M.R.C.S.E., of a daughter.

MARRIAGES.

BOWEN—MELHUISH.—On the 5th inst., at St. Stephen's, South Dulwich, Essex Bowen, M.D., to Edith, daughter of Wm. Melhuish, Esq.

WYLIE—MACGREGOR.—On the 11th inst., at Glasgow, William Wylie, M.D., of Skipton-in-Craven, to Elizabeth Harvey, daughter of the late James MacGregor, Esq., of Glengyle, N.B.

DEATHS.

BAKER.—On the 1st inst., at Halse, Robt. Baker, Surgeon, aged 77.

CORSELLIS.—On the 1st inst., Chas. C. Corsellis, Ext. L.R.C.P.L., aged 75.

M'KNIGHT.—On the 6th inst., at Mossy-green, Oakengates, Salop, George M'Knight, L.R.C.P.L.

MORISON.—On the 9th ult., at Horton, Yorkshire, Andrew Morison, Surgeon, aged 89.

TAYLOR.—On the 2nd inst., at Ayr, Dr. John Taylor, aged 56.

THOMSON.—On the 31st ult., at St. Heliers, Jersey, Samuel Thomson, M.D., aged 66.

TREACY.—On the 10th inst., at Low Dinsdale, Matt. Treacy, M.R.C.S.E., aged 60.

WATT.—On the 3rd inst., at Gallowgate, Aberdeen, Patrick Watt, M.D.

WILLCOX.—On the 29th ult., at St. Columb, Cornwall, J. Willcox, L.S.A.L., aged 58.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. Dobell: Report on Chest Diseases.
Dr. Hassall: On Food and its Adulterations.
Dr. Flint: On Phthisis.
Arabella B. Buckley: A Short History of Natural Science.
Mr. W. Williams: The Principles and Practice of Veterinary Surgery.
White's Latin and English Dictionary.
Hospital Construction and Organisation.
Annali di Ottalmologia.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments.)

THE LANCET OFFICE, JAN. 13TH, 1876.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Jan. 7	30·31	S.E.	33	34	...	36	29	...	Overcast
„ 8	30·06	E.	...	29	...	33	27	...	Overcast
„ 9	30·20	S.E.	...	33	...	35	24	...	Overcast
„ 10	30·32	E.	...	32	...	37	31	...	Overcast
„ 11	30·21	N.E.	...	32	...	34	31	0·09	Snowing
„ 12	30·28	N.W.	...	27	...	33	25	...	Overcast
„ 13	30·27	E.	...	33	...	31	25	0·12	Overcast

Notes, Short Comments, and Answers to Correspondents.

THE LANCET COMMISSION ON LUNATIC ASYLUMS.

WE will next week publish a Report by our Commission on the Wandsworth Lunatic Asylum.

POISONED SLEEP.

SLEEP is a boon commonly regarded as priceless; but it may be purchased too dearly. Macbeth murdered sleep; a very large and, unhappily, increasing number of well-meaning but misguided persons poison it. The medical profession has a keen interest in the growing practice of habitual recourse to sleep-potions, because it is with the connivance of the profession, if not under its specific advice, that these soporific poisons are employed. We think the time has come when some strong means should be taken to clear Medicine from the reproach of countenancing the lay use of opium, chloroform, chloral, chlorodyne, and the rest of the sleep-producers. The public should be told that they are playing with poisons. If they escape a so-called "accident" which ends in sudden death, they are scarcely to be congratulated, since if the body does not die, the brain is disordered or disorganised, the mind enfeebled, the moral character depraved, or evils hardly less deplorable than death are entailed. The consideration may be agonising, but it is urgent. The sleep produced by these narcotics or so-called sedatives—let them act as they may "on the nervous system directly" or "through the blood"—is *poisoned*. Their use gives the persons employing them an attack of cerebral congestion, only differing in amount, not in kind, from the condition which naturally issues in death. There is grave reason to fear that the real nature of the operation by which these deleterious drugs, one and all, bring about the unconsciousness that burlesques natural sleep, is lost sight of, or wholly misunderstood, by those who have free recourse to poisons on the most frivolous pretences, or with none save the exigency of a morbid habit. Great responsibility rests on medical practitioners, and nothing can atone for the neglect of obvious duty. The voice of warning must be raised instantly and urgently if a crying abuse is to be arrested, and final loss of confidence in drugs avoided.

Mr. Dalby's paper shall be published at an early date.

AN ÉCRASEUR FOR THE REMOVAL OF UTERINE POLYPI.

To the Editor of THE LANCET.

SIR,—Numerous and ingenious as have been the instruments devised for the removal of uterine polypi, yet considerable difficulty is more or less experienced in the application of them all. The wire-rope écraseur of Dr. Braxton Hicks is, I suppose, on the whole, the favourite instrument with most obstetricians. But the following modification of Dr. Lombe Atthill's écraseur will be found, I think, to be more easy of application than Dr. Hicks's instrument, and at the same time as efficient in its results.

The appliances requisite are two canulas of adequate length and calibre, an écraseur with eyelets sufficiently large to admit of the passage of the canulas, some whipcord, and some wire-rope or stout steel wire. After the preliminary dilatation of the os and the seizure of the growth by the vulsellum, the two canulas armed with the whipcord are passed up to the pedicle of the polypus; one tube is then held still, while the other carries the whipcord round the neck of the growth. To the extremity of the cord hanging from the end of one of the canulas is now neatly attached the wire-rope or steel wire according to the fancy of the operator; the other end of the cord is then pulled upon, and the wire is thus drawn up one of the canulas, follows the course of the whipcord round the neck of the tumour, and then passes down the remaining canula to the outside of the vagina; the cord is then detached from the wire, the canulas are slipped through the eyelets of the écraseur, and the extremity of the latter passed up along the canulas to the pedicle of the polypus; the tubes are then removed, and the ends of the wire are secured to the transverse sliding bar of the écraseur, and the neck of the tumour divided in the ordinary way. The great point to attend to is the neat and careful adaptation of the ends of the whipcord and the wire, so that the latter may easily slide through the tubes, and also pass smoothly round the neck of the growth.

Yours truly,

Southend, January, 1876. G. D. DEEPING.

CHLOROFORM AND ETHER.

SURGEON-MAJOR PORTER, Assistant-Professor of Military Surgery, has analysed the records, taken at the time of administration, regarding the employment of anæsthetics on 30 occasions at Netley Hospital, and published the results in the last volume of the Army Medical Blue-book. Chloroform and ether were used on 17 and 22 occasions respectively. As regards the former, the smallest quantity used for any one case was 1 drachm 30 minims, the largest 7 drachms; the average quantity in the 17 cases, 3 drachms 26·47 minims. The shortest time taken to place the patient under its influence was 3 minutes 45 seconds; the longest, 12 minutes; and the average time, 6 minutes 23 seconds. The average age of the patients was 26·98 years. As regards ether, the smallest quantity used for any one case was 3 ounces; the largest, 10 ounces; and the average in 22 cases, 5·32 ounces. The shortest time taken to place the patient under its influence was 1 minute 20 seconds; the longest time, 8 minutes 5 seconds. The average age of the patients was 23·90 years. As to the relative merits of these anæsthetics, as observed at Netley, it may be stated: First, with reference to chloroform, that by the administrator and operator the usual watchfulness and uncertainty of its effects were never lost sight of; in no instance was there vomiting either during or after administration of ether or chloroform. No food was given in any of the cases for three hours previous to the administration of the anæsthetics, nor was it necessary to administer any stimulant afterwards. On account of the few cases in which the drugs were used, it is difficult to say with certainty which should be preferred; but there appeared to be in the administration of ether and in its subsequent effects a greater freedom from dangerous symptoms, and a more rapid recovery of consciousness, than when chloroform was administered. The difficulty, however, of procuring pure ether, the large size of the apparatus required to administer it, and the quantity necessary to produce anæsthesia, as compared with chloroform, are objections to its general use in field practice.

DR. MACLEAN'S APPEAL.

To the Editor of THE LANCET.

SIR,—It will be in the recollection of your readers that with your kind permission I ventured, through your pages, to appeal to the members of the profession, more particularly to those in the public services, in behalf of the family of a late army medical officer, left in circumstances of great distress, and this, as explained in my appeal, without any blame attaching to his memory.

This appeal has been responded to in the most generous manner by those to whom it was addressed, and contributions have come in, not only from comfortable English homes, but from almost every part of the world where the British drum is heard, and from distant continents and islands of the sea. The fund in the hands of Messrs. Atherley, Hankinson, and Darwin, Southampton, now amounts to £373 15*s.* 6*d.* Three trustees will be appointed by Major-General Lewis, R.A., Dr. Parkes, Mr. Longmore, and myself, and the above sum, with the advice of the bankers, will be invested in such manner as the law permits trustees to use for the benefit of the family.

I have to add that since the publication of the appeal the two youngest girls have been placed by two benevolent ladies in a first-class orphanage, and that a strenuous effort is being made to secure the election of the youngest boy into the Medical Benevolent College, Epsom.

It is not my intention to load your columns with a long list of subscribers. I have already acknowledged every contribution made through me, and a great many subscribers have expressly desired that their names should not be published. It only remains for me, in my own name, and in the names of the other friends associated with me, to thank all those who have at our call so generously helped in a case where help was sorely needed.

I am, Sir, faithfully yours,

Netley, Jan. 3rd, 1876. W. C. MACLEAN, M.D.

AGUE QUARTERS.

A CORRESPONDENT of *The Times*, in commenting on the prevalence of ague among the men of the Royal Artillery, and after conceding that the barracks at Woolwich are unhealthy, goes on to say that ague does not originate there, but is brought almost invariably either from Tilbury or Sheerness. "The former station is a dismal fort in swampy marshes, manned by an unfortunate battery of Garrison Artillery from Woolwich, which is relieved every six months, and generally returns with a number of non-commissioned officers and men ill with ague and fever. The latter is one of the most hateful stations in England, where the unfortunate recruits enlisted for the Foot Artillery are condemned to spend the first year or more of their service. The parade here is under the river level, the whole place is surrounded with damp and dismal marshes, and ague is, as might be expected, very prevalent among the men who come from this dreadful place."

THE MEDICAL CONGRESS OF PHILADELPHIA.

THIS Congress is to hold its sittings between the 4th and 9th of September, 1876. In the morning the general meetings are to take place; in the evening the sections, of which there are nine, will meet in distinct localities. Dr. Samuel Gross is the President of the organising Committee.

Students.—The regulation of the Royal College of Surgeons of England states distinctly: "A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to the date of his reference." This appears to us to answer all the other questions. In case of any difficulties arising at his school, "Studens" had better make application to the Dean or Medical Superintendent.

TO "MORTUARIES" ADD INQUEST-ROOMS.

Now that the appeal to Mr. Sclater-Booth has practically failed—through no fault of that Minister, but the supercession of his powers by the extraordinary development of infinitesimal local government,—we would urge upon the promoters of "mortuaries" an extension of their platform and the prosecution of a larger question directly before Parliament. Why not propound a scheme for the consideration of the Legislature which shall at once redress the grievance of having no suitable place of deposit for bodies of persons dying in the public ways and crowded tenements, while at the same time it goes far enough to remove a notorious scandal? Without doubt many of the irregularities connected with the proceedings of the Coroner's Court are, directly or indirectly, due to their being held at public-houses. That being so, while it is sought to obtain a place of deposit for bodies, instead of sending them to public-houses, would it not be well to advance a step further, and provide suitable rooms for post-mortem examinations and for the holding of the Coroner's Court? A small and cheap edifice of this composite character would be less objectionable to the resident population than a mere "deadhouse." And instead of coroner and jury being compelled to take refuge in a public-house, which is not merely indecorous, but must be most offensive to the feelings of the dignitary and sub-dignitaries concerned, they would enjoy a local habitation as well as a name, and possibly the habitation might lead to better and more dignified practices, and so add lustre to the name, which at present is linked with some opprobrium, perhaps not altogether disconnected with the circumstances of the Court being held at a shop licensed for the unlimited consumption of intoxicating liquors. The mortuary question would acquire new force, and secure the co-operation of ardent friends, who are not friends of ardent spirits, if it underwent the not unnatural transformation suggested, and we think demanded by the facts.

Mr. W. A. Patchett.—Not received.

THE CASE OF POISONING AT THE DUNDEE ROYAL INFIRMARY.

To the Editor of THE LANCET.

SIR,—A case of prussic-acid poisoning occurred in this hospital last week. I should like you to know exactly the circumstances under which it took place.

On the morning of the 29th December, 1875, J. D——, aged forty-one, a mason, was admitted with symptoms of pulmonary consumption. He was examined by the visiting physician at the morning visit, and prescribed for. He was ordered hydrocyanic acid mixture, six ounces, half an ounce three times a day. Half an ounce of the hospital "mist. acid. hydrocyan." contains, with other things, three and a quarter minims of dilute hydrocyanic acid. The case-card bearing this prescription was taken, as usual, to the laboratory.

Our late dispenser, who has been nearly two years here, and who is an exceedingly careful and accurate man, had resigned owing to ill health, and was to leave on the 29th. On the morning of the 27th a shopman from one of the druggists in town had come to serve as temporary substitute till a successor was elected. Resort was had to that particular druggist because on a similar emergency previously he had supplied the infirmary with an efficient substitute. The substitute had been, therefore, working two whole days along with our dispenser, and had had occasion, as he admits, to dispense the above prescription a good many times in those two days, the prescription being one in very common use. The hydrocyanic acid mixture, in a concentrated form (one to seven of water) stands, so marked, on the laboratory counter ready to hand; the bottle containing the dilute hydrocyanic acid is so marked, has a red poison label attached, and stands in a closed press. Between 12 and 1 P.M., when the probationer of the ward went for the medicines to the laboratory, this particular medicine was not yet ready. While she waited the dispenser correctly wrote the label, and the substitute filled the bottle. She then took the medicines to the ward, having heard, as she alleges, nothing pass between the men to attract her attention in any way to this bottle. About 2.30 P.M. the patient received at the hands of the nurse half an ounce of the contents of the bottle sent up. Calling out "I am going to be sick," he instantly fell back unconscious. The medical assistant was summoned at once. I myself happened to be confined to bed, but on being informed of the accident hurried round to the ward. Cold affusion, evacuation of the stomach, artificial respiration, and galvanism were tried. The patient died within a quarter of an hour.

The substitute admits without hesitation that he filled the patient's bottle out of the press-bottle *undiluted*, though he was perfectly aware it was a deadly poison, and though he had served the same prescription several times before, serving it rightly out of the counter-bottle *diluted*. His defence is that he was emphatically ordered so to fill it by the dispenser. The dispenser says he simply told him to fill it out of the counter-bottle, and that nothing farther passed.

The case is in the hands of the Procurator Fiscal.

I remain, Sir, yours truly,
E. NEAVES M'COSH, M.D.,
Dundee Royal Infirmary, Jan. 4th, 1876. Medical Superintendent.

SYRUP OF CHLORAL.

At Paris this syrup is prepared of different strengths, as the proportions have not yet been settled by those in authority. It is to be hoped that the pharmaciens who sell the syrup are careful to put the maximum dose on the label. Even this may prove abortive, since the greatest care should be observed as to the susceptibility of different patients. This evil being so apparent, the pharmaciens of the second district of Paris have agreed to prepare syrup of chloral in this proportion:—Chloral, 15 grains; syrup, about 7 drachms: representing a tablespoonful. Some attempt at improvement might also be made in this country. Chloral syrup, and indeed a great many other preparations, are advertised without the specification of the dose. Medical men are often precluded from prescribing very elegant and useful forms of well-known substances simply because the manufacturers do not mention in what proportion the active ingredient exists in the syrup, tincture, pill, &c.

DR. OTIS ON GLEET.

PUTNAM and Sons, of New York, are imitating a Paris literary undertaking, called "Revue des Cours Scientifiques," but with this difference, that the American collection comprises only *clinical* lectures. They are edited by Dr. Seguin. One of these lectures lies before us; it was delivered by Dr. Otis, whose views and practice as to stricture were a short time ago alluded to in THE LANCET. Dr. Otis gives us his opinion as to the nature of gonorrhœa and gleet; and as to the latter affection states, "that *gleet is always dependent on stricture*; that while stricture may be present when no gleet is observed, *whenever* there is a *gleet* in the sense of a chronic urethral oozing or discharge, an intelligent and thorough exploration with suitable instruments will *invariably* discover a *distinct* contraction of the meatus urinarius, or a *readily recognized* coarctation of the urethra at some point; and, further, that the complete restoration of the urethra to its normal calibre and suppleness at the contracted points will be required to warrant the statement that a *permanent cure* has been effected." (The italics are the author's.) The suitable instruments alluded to are the well-known metallic bulbous bougies, and the means of cure division of the stricture. This latter ordeal seems a little severe, and some patients might certainly object, since dilatation offers some chances of success. Nor will it be conceded by every surgeon that the habitual oozing must necessarily be connected with stricture. But gleet is so intractable a complaint that the labours of Dr. Otis are extremely valuable, as, in many cases, the system advocated by him may prove very advantageous.

M.R.C.S.—The matter is fully noticed elsewhere.

THE ARMY MEDICAL EXAMINATION.

To the Editor of THE LANCET.

SIR,—With a somewhat spiteful accusation of trades-unionism, it has been hinted in certain quarters that on the 14th of February a pitched battle is to be fought between the members of the Army Medical Department and the authorities who rule that department, and that if a sufficient number of candidates present themselves on that day, the latter will be held to have conquered. Nothing could be more unsound than such an assumption. To everyone acquainted with the profession it must be well known that in the medical schools of each of the three countries there is a "residuum" of students who are ever prepared to accept greedily any appointments capable of affording an immediate return of 10*s.* a day, quite irrespective of what position may attach thereto, and who would be only too ready to seize such an opportunity as the present to secure, by a nominal competition, commissions from which the high-class students turn away in obedience to the advice of the disinterested professors by whom they have been educated. It is, therefore, possible that at least forty applicants will be forthcoming on Valentine's day, and the experience of the 30th September, 1864, leaves little doubt but that at the conclusion of the examination the required number will be found to have obtained the qualifying total of marks. However, be this as it may, there is but one course compatible with the dignity of the Secretary of State for War—viz., in redemption of his pledge to Dr. Lush in the House of Commons on the 16th July last, to publish at once the new Warrant for the Army Medical Department, so that, be its concessions scant or liberal, they may not seem to be dictated by the paucity or redundancy of candidates at a single examination, and no occasion given for the imputation of motives equally unworthy of an able statesman and a high-principled gentleman.

Yours &c.,
January, 1876. JABORANDI.

A PLEASANT WAY OF TAKING CASTOR OIL.

MIX ten grains of powdered tragacanth with two drachms and a half of water; upon this pour very slowly, drop by drop, half an ounce of castor oil, stirring constantly with the pestle. When the mixture is complete, add about three ounces of water, an ounce of syrup, and a few drops of laurel-water. In this manner a white emulsion is obtained, in which the taste of the castor oil is (according to the *Paris Médicale*) quite masked, and replaced by the perfume of the laurel-water.

Mr. A. Evans.—Articles on the subject have appeared in recent numbers of THE LANCET.

FOUR AT A BIRTH.

To the Editor of THE LANCET.

SIR,—On Saturday morning last I was called at half-past two to see the wife of John W——, a mechanic. At about seven o'clock on the previous evening the waters had broken. About eleven and soon after, two children were born. On my arrival I found her very low, the bed under her being saturated with blood, besides large quantities elsewhere. A strong dose of nitric acid in a degree at once allayed the bleeding. On making an examination, I was for a moment deceived by the promontory of the sacrum, which was curved very unnaturally downwards and forwards, and felt like a head presenting. Introducing the hand and arm, I found a mass of membranes &c. at the top of the uterus, high up in the abdomen. With some little difficulty I disengaged a leg and drew it down, and in a short time delivered her of the third child. I again introduced my hand, and delivered her of the fourth child. All four were girls, and apparently seven months' children. They were of good size and well formed. There were three placentæ, the largest one being attached to the apex; to this were attached two cords. On either side was a smaller placenta, each with one cord attached; one of the cords was slightly branched, indicating, I believed, an abortive fifth fœtus. The great weight of the four children and their height in the abdomen had kept the poor woman for some time in much discomfort. She had only slightly exerted herself the day previous; but this had evidently caused two of the children to fall from their position, and to rupture the membranes. She is doing well, but is very anæmic from the great loss of blood. She has previously borne six children, twins once.

I remain, Sir, yours truly,
T. P. LUCAS, M.R.C.S.E., &c.
Mount-terrace, Westminster-bridge-road, Dec. 23th, 1875.

BEST COPY AVAILABLE

STREET-SLIDES.

IF we are to be favoured with more frost, it will be prudent to look to the condition of our foot-paths and pavements in more ways than one. At present the praiseworthy but scarcely practical energy of the authorities seems incapable of expressing itself in any other form than an order to some policeman in a district—who appears to like the business better than marching his lonely beat—to call round and intimidate those perverse householders who do not before ten o'clock in the morning take measures to convert the pavement opposite their doors into a dangerous slide. If the street urchins and strange-looking men who ply broom and shovel so noisily whenever it snows have scraped the stones until it is almost impossible for any rapid or timid pedestrian to venture over them, the policeman passes by; if not, he enjoys a colloquy with the servants. If the police have any power left after their stupendous effort, it might be well if they were to go round with a bucket of salt or sand, and sprinkle the slides made by the boys, who congregate sometimes in parties of twelve or twenty for the popular diversion of skating without artificial appliances and on *terra firma*. It is obviously too much to expect that the police will *prevent* the pursuit of this perilous and peril-creating amusement. If a constable does occasionally intervene just enough to warm himself, he must retire, and probably while he is yet explaining to some sympathising bystander how dangerous the slide may prove, the juveniles resume their diversion. Perhaps most foot-passengers are on the alert, and watchful to avoid these traps by day; but when it grows dark, or after a slight fall of fresh snow, it is not easy to detect the smooth surface, and a fractured fibula, a sprained ankle, possibly serious injury to forearm or elbow, or last, but not least, a severe concussion occurs, and is recorded as an "accident." We are always loth to heap burdens on so useful a body of public servants as the police; but the matter is really one of some urgency, and claims their attention.

Introx.—The question has been decided in the negative.

AN ANOMALY IN MIDWIFERY PRACTICE.

To the Editor of THE LANCET.

SIR,—Thinking the following case might prove interesting to your readers, I beg to forward it.

L. T——, a young lady of delicate constitution and very spare habit, in labour of her first child, summoned me to her assistance. On my arrival I found the first stage well nigh completed, all going on rapidly and comfortably. In due course expulsive pains commenced, but of an ordinary character. Very few had been borne, however, when my patient remarked, "See how my face is swelling"; and surely enough it was, and went on swelling to such an extent that in a few minutes both eyes were completely closed, and the whole of the cellular tissue of the face, chest, and arms became rapidly distended with air. In the space of half an hour the distension was so great as to render the upper half of the body double its natural size, identity being almost destroyed. The perineum being a very rigid one, and the pains strongly expulsive, I could not artificially expedite delivery without risk of considerable laceration, so I allowed labour to terminate naturally, which, considering the resistance to be overcome, was somewhat rapidly accomplished. Great oppression of breathing and troublesome cough were complained of for two or three days; but the air became gradually absorbed, and at the end of a fortnight the whole had been removed, no crackling being felt on pressure at any one point, and I left my patient quite well.

I offer no explanation as to how the air made its way into the cellular tissue; but the condition was quite novel as far as my experience (of over 2000 midwifery cases) is concerned.

I am, Sir, your obedient servant,

A. PRINCE, L.R.C.P. Ed.

Dudley-grove, Paddington, Dec. 30th, 1875.

A BULLET IN THE LEFT VENTRICLE.

AT a late meeting of the Surgical Society of Paris, M. Tillaux presented the heart of a woman who had been shot twice with a revolver on October 7th. The bullets measured three lines in diameter. One was found lying on the diaphragmatic pleura of the right side, and had given rise to an abscess of the liver. The other had run through the right lung, had penetrated the heart by the posterior wall of the left ventricle, and was found lodged in the latter. The patient lived eighteen days with this foreign body in the ventricular cavity, and nothing during life led to the suspicion that such a lesion had taken place. The heart was several times auscultated, and no information was obtained, the pulse being throughout regular. The hole made by the ball could hardly be made out, showing that cicatrisation had been rapid and complete. M. Tillaux knew that two bullets had penetrated the chest, and discovered the second by mere chance, after having looked for it in the lungs and mediastina.

THE PROFITABLENESS OF QUACKERY.

IT is lamentable to think how much more profitable quackery is than regular medicine. A medical botanist, R. Graham, *alias* James Arnold Kelly, of Liverpool, or North-road, Preston, at the Longton Police Court a few days ago, was committed for trial on the charge of representing himself as an agent of "Mr. Clarke, the proprietor of the celebrated Blood Mixture," and obtaining money from simple people by such means. Mr. Clarke was one of the witnesses, and he deposed to being the proprietor of the patent medicine, which had a large sale all over the world. The sale in England realised £30,000 a year, and in other countries £20,000. Supposing the half of this to be the true profit, what an income compared with that of any regular and scientific medical man! What London physician will pretend to have half the above income as the result of his labours and his anxious studies. But we must accept facts, not envy the rewards of quacks.

THE BIENNIAL INTERNATIONAL MEDICAL CONGRESS.

THE last of these meetings was successfully held at Brussels last summer, and it was decided that the next Congress should be convened at Geneva in 1877. A Committee of ten members has already been formed—President, Dr. Vogt; Vice-President, Dr. Lombard; General Secretary, Dr. Prévost; Joint Secretaries, Drs. Reverdin and d'Espine.

An Army Surgeon.—The success of most schemes depends upon the way they are carried out; but we should like to know, in the present instance, what scheme is being carried out. As far as we can gather, it bears little resemblance, in letter or spirit, to the organisation as first shadowed forth by us many years ago, when complaints from regimental medical officers were not of very unfrequent occurrence. The late Government had, no doubt, a perfect right to lay down any organisation it thought fit to impose; but retrospective legislation is unpopular, and, generally speaking, bad. We concur with our correspondent in thinking that vested interests should be respected as far as possible, and reasonable time given for the adjustment of old or existing customs to those newly introduced; and in the case of the medical service an injury was inflicted by the curtailment of pecuniary advantages and other privileges attaching to rank at the very time when the labours of the medical officers were increased.

REGISTRATION OF DEATHS BY THE UNQUALIFIED.

To the Editor of THE LANCET.

SIR,—I take the liberty of laying the following case before you:—Living near to me is an unqualified man, who has been a medical assistant, and who is now practising on his own account, taking medical, surgical, midwifery, or any cases he can get, at very low charges. He is sufficiently sharp not to so describe himself as to come under the Medical Act; but under his name, over the door, writes "Accoucheur." If a death occurs amongst his patients, he gives a certificate, which the people believe obtains registration thereof. As a fact, I expect the registrar returns the death as "uncertified." This has been going on for nearly a year. I understand that registrars have a discretionary power as to registering uncertified deaths. Will you please state your opinion on the following points:—

1. Is the discretionary power of the registrar limited, or can he go on continually registering the deaths of persons whom he knows have only been attended by an unqualified man?

2. Would it be wise or useful on my part to lay the case before the Registrar-General?

I feel sure that if the registration of the deaths of his cases could be stopped, he would cease to find employment.

I remain, Sir, yours truly,

January, 1876. OMEGA.

*** In the above case we believe the registrar to be acting entirely within the bounds of his instructions. We regret, as we have repeatedly said, that registrars should be permitted to register deaths in this way; and the statement of the facts to the Registrar-General in regard to places where this system attains great dimensions is a duty on the part of qualified practitioners. It really enables unqualified practitioners to practise by giving them a sort of recognition.—ED. L.

WE have received copies of a long correspondence respecting certain abuses and irregularities alleged to have existed on board the emigrant ship *Celestial Queen* between England and New Zealand. The surgeon superintendent appears to think that he has been ill-used both by the Agent-General and the Commissioners of Emigration. It is impossible to judge as to the merits of the case from the correspondence now before us, the intemperate character of which would infallibly damage any cause, however good it might be, and by no means add to the prestige of mercantile marine surgeons.

Quæres had better consult our Students' Number.

PROTRACTED INCUBATION OF FEVER.

To the Editor of THE LANCET.

SIR,—The protracted incubation of fever is not perhaps so uncommon as the paragraph in your last number would seem to infer.

In 1839, whilst lying on board ship at Howrah, almost all the ship's officers and crew were affected with fever and ague. I myself had an attack of fever common to the locality, but no ague. I recovered my health, and was three months in Calcutta after that time. Our voyage home on board the poor old *Reliance*—afterwards wrecked off Boulogne—was a disastrous one, and we were five months at sea. I landed well and hearty. Some weeks after being on shore, in leaping over a bar, I fell, and was picked up stunned, sick, and shivering. The doctor was sent for from the neighbouring town, and prescribed. I got worse, so he ordered me to be carried into the town, and lodged as near his own house as possible. I grew no better; and one day, finding me in a high fever, with dreadful aching pains in back and limbs, puzzled what to do, he had recourse to that short-anchor of bygone ignorance, the lancet. I was not in the profession at that time, and I do not remember the amount of blood taken. The relief to my symptoms was immense, and on the second day I was allowed to rise from my bed, where I had been confined up to this time. Upon sitting up I was seized with a violent fit of ague, which went through its regular course, and was followed by others every third day for some time. These, however, soon became of the quotidian type. It will be seen that I was well of Howrah fever at least eight months before I had an attack of ague, and that until I had been bled I had had no fit at all.

The question arises, How and where did I get this ague? I had been in no malarious district since I left India, I was perfectly well before the fall, and had no cold stage like ague until after the lancet.

The conclusion to be come to must, I think, be this—that a fever poison may be carried about in a healthy system inert for months, and may be excited into action by any cause that upsets or weakens the occupant.

I remain, Sir, yours obediently,

Maida-hill, Jan. 4th, 1876. R. S. SIBSON, M.D

CHLORAL DRINKING.

OUR excellent contemporary, the *Pall Mall Gazette*, has the following sensible observations *apropos* of a recent death from an excessive dose of chloral:—

"Scarcely a week passes now without an illustration of the danger incurred by the practice which unfortunately prevails of taking large doses of opiates to alleviate pain or discomfort. Instead of seeking the advice of a medical man and learning at least the nature and properties of these drugs, persons who take them frequently do so without the slightest knowledge of their effects, and consequently have to pay the penalty for their imprudence. The latest case of this nature is that of a lady at Exeter, on whose body an inquest was held on Monday. According to medical evidence, the deceased had probably consumed in two hours 125 grains of chloral hydrate, from 15 to 20 grains being a sufficient dose. The jury returned a verdict of 'Death from an overdose of chloral,' some of them expressing an opinion that the sale of so highly dangerous a drug should be placed under the same restrictions as the sale of poisons. Whether this is done or not, there is some comfort in the reflection that the growing demand for chloral hydrate by ladies will, beyond a doubt, lead to its being extensively adulterated by druggists, and its noxious effects will by this means probably be somewhat mitigated."

WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—In a recent number of THE LANCET you commented upon the insanitary condition of Northfleet, and its high rate of mortality from zymotic diseases, most conspicuous among which was whooping-cough. I should be very glad if you could suggest any means by which the spread of this disease can be prevented. On a recent outbreak in my district I issued circulars to the various schoolmasters and schoolmistresses, requesting them to have all children suffering, or suspected to suffer, put upon the sick-list and isolated. Meanwhile one of my own children was running about at large with it unsuspected by me. He had contracted it at school, so mildly that I did not even suspect it till my other children began to suffer, and I did not know it for certain till my other children began to wooop. Last summer, when I was out for a trip, I rarely went on any railway, steamboat, or place of public resort without hearing a fellow-traveller whooping, and it seems to me that where the sufferers are thus exposed the sanitary authorities have no easy matter to prevent the spread of an epidemic. I am, Sir, yours &c.,

January 4th, 1876. A MEDICAL OFFICER OF HEALTH.

ERRATUM.—The name to a description of a new form of Stretcher, which formed the subject of a short paper in our last impression, page 49, should have been Charles R. B. Keetley, not "Reetley."

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Parkes, Netley; Dr. Brown-Séquard, Paris; Mr. Spencer Watson, London; Mr. T. Holmes, London; Dr. B. W. Richardson, London; Mr. Dalby, London; Mr. Jabez Hogg, London; Dr. Hastings, London: Mr. Utting, Castleton; Dr. Edis, London; Mr. Tallack, London; Dr. Ryan, London; Dr. Morgan, Rathcormac; Dr. A. Hill; Mr. Parr, London; Dr. Smith; Mr. Wolverson, Alfreton; Mr. Sewill, London; Mr. Millson, London; Mr. Almond; Mr. B. Jones, Chorley; Mr. Spottiswoode; Mr. Pearce, London; Dr. Pyle, Cairo; Mr. Sutcliffe, Clapham; Mr. Keetley, London; Mr. Leonard, Chester; Mr. J. G. Brown, London; Dr. Buchanan, Glasgow; Mr. Collinridge, Ashton-under-Lyne; Mr. Ainsworth, Accrington; Dr. Townsend, Miltown; Mr. Andrew, Mossley; Mr. Ormond, Wantage; Mr. Henderson, London; Dr. Brown, Aberdeen; Mr. G. Ansell, London; Dr. Cogan, Allerton; Mr. Webber, St. John's-wood: Mr. Reid, Stafford; Mr. Land, Exmouth; Mr. Rowland, Richmond; Mr. N. Baker, London; Dr. Nelson, Montreal; Mr. Dachtory, Peshawur; Mr. Alcock, Hull; Mr. Logie, Cranbrook; Dr. Bodine, Trenton, New Jersey; Mr. Evans, Cardiff; Mr. Nettleship, London; Mr. Chandler, London; Mr. M'Gill, Leeds; Surgeon-Major Ringer, Allahabad; Mr. Wakefield, London; Mr. Clutton, London; Mr. Willmore, Stockbridge; Mr. Davidson, Edinburgh; Mr. Chaffers, Keighley; Dr. Quill, Freshwater; Mr. Spencer, Watford; Mr. Morgan, Rathcooma; Dr. Alexander, Bradford; Dr. Waters, Liverpool; Mr. Cresswell, Dowlais; Mr. Braden, Lewes; Mr. Sporforth, Birmingham; Dr. Richardson, Sheffield; Mr. Buchanan, Chester; Mr. Maw, London; Mr. Curwen, London; Mr. Shipman, Grantham; Dr. Fitzpatrick, London; Dr. Graham, Rotherham; Captain Tidmarsh, Brighton; Dr. Rogers, London; Dr. Patchett; Mr. Fry, Wandsford; Dr. Sheaf, Barrow-on-Furness; Mr. Hatchard, St. Leonard's; Mr. Vacher, Birkenhead; Mr. Lambert, Durham; Mr. Stewart, London; Dr. Andrews, Moseley; Mr. J. Macdonald, London; The Director-General of the Naval Medical Department; The Registrar-General of Edinburgh; Omega; Nemo; M.R.C.P. Edin.; Inquirer; A Subscriber; M.R.C.S; Studens, London; A Young L.R.C.P. Lond.; G. S.; L.K.Q.C.P.; Medicus; &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Henderson, Kendal; Mr. Lloyd, Cheswardine; Mr. Patrick, Bolton; Mr. Maunder, London; Mr. Green, Newcastle-on-Tyne; Dr. Cumming, Edinburgh; Mrs. Jesse, Salisbury; Dr. Newton, Mudgee, New South Wales; Dr. Otis, New York; Mr. Grime, Blackburn; Mr. Nixon, Bournemouth; Mr. Ware, Wigan; Mr. Hay, Wolverhampton; Mr. Marley, Padstow; Mr. Platt, Oldham; Mr. Smith, Gateshead; Mr. Scott, Warwick; Mr. Spence, Manchester; Dr. Akerman; Mr. Palmer, York; A. B., Gilmorehill; Omega, Peterborough; Oxoniensis; C. B. A., London; B. A., Blackburn; X. X.; A. B., Ramsgate; W. P., Cheltenham; T., Bradford; Medicus, Bristol; M. B., Southampton; Surgeon, Manchester; J. S.; E. W.; Thetis.

Western Morning News, *East London Observer*, *Newcastle Chronicle*, *Surrey Advertiser*, *Richmond Times*, *Manchester Guardian*, *Cork Constitution*, *Merthyr Telegraph*, *Liverpool Post*, *Staffordshire Daily Sentinel*, *Record*, and *Birmingham Daily Post* have been received.

Medical Diary for the ensuing Week.

Monday, Jan. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Lettsomian Lectures: Dr. C. Theodore Williams, "On the Influence of Climate in the Treatment of Pulmonary Consumption: The British Health Stations and their Results."

Tuesday, Jan. 18.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Garrod, "On the Classification of the Vertebrated Animals."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be exhibited:—Artificial Teeth removed from Trachea; the Amyloid Reaction in the Dysmenorrhœal Membrane; Anomalous Blood-cyst; Fibroma of Ovary; Stenosis of the Mitral and Tricuspid Valves; Pleurisy invading Lymphatics of Lung; Cancer of Liver and Pancreas, with Polypi in Portal Vein, &c.; Cirrhosis of Liver in a Girl aged six; Large Cyst of Choroid Plexus; Old Injury to Head, with Chronic Hydrocephalus; Contents of Dermoid Ovarian Cyst; Disease of Larynx, with Pressure on Right Inferior Laryngeal Nerve; &c. &c.

Wednesday, Jan. 19.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M

Thursday, Jan. 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Prof. Gladstone, "On the Chemistry of the Non-metallic Elements."

Friday, Jan. 21.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Evening Meeting.—9 P.M. Prof. Tyndall, "On the Optical Department of the Atmosphere in relation to the Phenomena of Putrefaction."

Saturday, Jan. 22.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. R. P. Pullan, "On his Excavations in Asia Minor."

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—

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